Specialist Medical Review Council

Declaration and Reasons for Decisions

Section 196W
Veterans' Entitlements Act 1986

Re: Statements of Principles Nos. 69 and 70 of 2012
in respect of Myeloma
Request for Review Declaration No. 23

1. In relation to the Repatriation Medical Authority (the RMA) Statement of Principles No. 70 of 2012 concerning myeloma and death from myeloma, made under subsection 196B (3) of the *Veterans' Entitlements Act 1986* (the VEA), the Specialist Medical Review Council (the Council) under subsection 196W of the VEA:

   DECLARES that the sound medical-scientific evidence available to the RMA is insufficient to justify an amendment to Statement of Principles No. 70 of 2012 to include a factor or factors in the same or similar terms to existing factors 6(c) and 6(d) in Statement of Principles No. 69 of 2012.

2. In relation to the RMA Statements of Principles Nos. 69 and 70 of 2012 concerning myeloma and death from myeloma, made under subsections 196B (2) and 196B (3) of the VEA, the Council under subsection 196W of the VEA:

   DECLARES that there is sound medical-scientific evidence on which the RMA could have relied to amend both the Statements of Principles to include the factor set out below; and

   DIRECTS the RMA to amend both Statements of Principles Nos. 69 and 70 of 2012 by including the following factor:

   Having exposure to 2,3,7,8 tetrachlorodibenzo-para-dioxin (TCDD) sufficient to produce an expected initial serum TCDD level of at least 1500 parts per trillion before the clinical onset of myeloma.

INDEX of CONTENTS

REASONS FOR DECISIONS

INTRODUCTION TO THE COUNCIL AND ITS FUNCTIONS

3. The Specialist Medical Review Council (the Council) is an independent statutory body established by the VEA. In general terms, upon receipt of a valid application the Council is to review as relevant:

   – the contents of Statement/s of Principles in respect of a particular kind of injury, disease or death; or

   – a decision of the RMA not to determine, not to amend, Statement/s of Principles in respect of a particular kind of injury, disease or death.

4. Again in general terms, in conducting a review, the Council must review all the information that was available to (before) the RMA when it determined, amended, or last amended the Statement/s of Principles (or decided, or last decided not to determine or amend a Statement/s of Principles) in respect of a particular kind of injury, disease or death. The Council is constrained to conduct its review by reference to the available information only.[1]

5. Fundamental to Statements of Principles, and so to a Council review, is the concept of sound medical-scientific evidence, as that term is defined in section 5AB(2) of the VEA.

6. **Appendix A** sets out further details:

   – of the composition of the Council for this review;

   – consideration by a previously constituted Council of Statements of Principles previously in force in respect of myeloma and death from myeloma;

   – the legislative scheme; and

   – the information that was available to (before) the RMA.

THIS REVIEW

7. The Applicant in his application sought review of the contents of Statements of Principles Nos. 69 and 70 of 2012 concerning myeloma.[2] However, in

---

1 *Vietnam Veterans' Association (NSW Branch) Inc v Specialist Medical Review Council and Anor* (full Federal Court decision) (2002) 72 ALD 378 at paragraph 35 per Branson J.

2 Statements of Principles Nos. 69 and 70 of 2012 each define myeloma as:

> …a malignant disease of plasma cells, in which a single line of plasma cells accumulates and produces a monoclonal immunoglobulin. This definition includes plasma cell leukaemia, multiple myeloma and solitary plasmacytoma of bone or extramedullary plasmacytoma, but excludes monoclonal gammopathy of undetermined significance.

The Council noted the statement on the RMA website that Myeloma was "previously known as - multiple myeloma". The Council considered the two descriptions are of the same disease and

the Council's view, the Applicant did not raise a valid ground for review of the contents of Statement of Principles No. 69 of 2012, as the Applicant's contentions concerning that Statement of Principles were that it should apply to veterans other than those who had had (in general terms) operational service.[3] The VEA specifies to whom Statement of Principles No. 69 of 2012 applies. In the Council's view the Applicant's contentions in this regard raised a question of law, and so were not a matter in respect of which the Council had jurisdiction.[4]

8. The Applicant clarified that his contention was that there was sound medical-scientific evidence on which the RMA could have relied to include in Statement of Principles No. 70 of 2012 a factor or factors in the same or similar terms to existing factors 6(c) and 6(d) in Statement of Principles No. 69 of 2012.[5]

9. The Council later expanded the scope of its review to include exposure to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) at very high doses[6].

10. **Appendix B** sets out further details of the background to this review.

---

evaluated the available information on the basis that references to myeloma and multiple myeloma are interchangeable.

3 See footnote 9 for the relevant service to which the reasonable hypothesis Statement of Principles No. 69 of 2012 applies.

4 The Council advised the Applicant of its preliminary view in a letter dated 21 February 2013, and provided the Applicant an opportunity to comment.

5 There are no existing factors in Statement of Principles No. 70 of 2012 dealing with the exposures in existing factors 6 (c) and 6 (d) of Statement of Principles No. 69 of 2012.

Existing factor 6(c) in Statement of Principles No. 69 of 2012 provides:

> inhaling, ingesting or having cutaneous contact with a phenoxy acid herbicide from the specified list, for a cumulative period of at least 1000 hours, within a consecutive period of ten years before the clinical onset of myeloma, where the first exposure occurred at least five years before the clinical onset of myeloma; and

Existing factor 6(d) in Statement of Principles No. 69 of 2012 provides:

> inhaling, ingesting or having cutaneous contact with a chemical agent contaminated by 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD), for a cumulative period of at least 1000 hours, within a consecutive period of ten years before the clinical onset of myeloma, where the first exposure occurred at least five years before the clinical onset of myeloma.

'A phenoxy acid herbicide from the specified list' and 'Inhaling, ingesting or having cutaneous contact with a chemical agent contaminated by 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD)' are terms defined in paragraph 9 of Statement of Principles No. 69 of 2012 (see [149]).

6 The details of the expanded scope are set out at paragraph 150.

11. **Appendix C** sets out the details of the preliminary and amended scope of this review.

12. The Council accordingly reviewed the sound medical-scientific evidence relevant to the Applicant's contentions[7] (essentially, inhaling, ingesting or having cutaneous contact with a phenoxy acid herbicide from the specified list and/or inhaling, ingesting or having cutaneous contact with a chemical agent contaminated by TCDD as set out by the Council in the scope of review (See **Appendix C**).[8]

THE COUNCIL'S PROCESS

13. In conducting a review, the Council identifies from all of the information that was available to (before) the RMA at the relevant times the sound medical-scientific evidence - as that term is defined in section 5AB(2) of the VEA (see [133]) - which in its view 'touches on' (i.e. is relevant to) the issue of whether a particular kind of injury, disease or death (in this review, myeloma) can be related to service with the exposure under consideration.

14. Considering all the relevant information, the Council decides whether or not there is sound medical-scientific evidence that indicates a reasonable hypothesis connecting the particular kind of injury, disease or death to relevant service.[9] [10] In a reasonable hypothesis, the evidence 'points to' as opposed to merely 'leaves open' a link between injury, disease or death and the relevant service. In a reasonable hypothesis, the link is not 'obviously fanciful, impossible, incredible or not tenable or too remote or too tenuous.'[11]

15. If Council is of the opinion that there is a reasonable hypothesis, members then determine, in addition, whether a connection exists to relevant service on the balance of probabilities,[12] i.e. whether the connection is more

---

7 The Council did not consider information about other chemicals mentioned by the Applicant such as Phenyl mercury acetate; Chlordane; Dieldrin; Azinphos-methyl; Tecto 90 as the Council considered them outside the scope of the Applicant's contentions.

8 Given the Council's proposed expansion to the scope of review to include a potential factor concerning exposure to high doses of TCDD, the Council also reviewed the sound medical-scientific evidence which touched on that contention (see Appendix C).

9 Relevant service in reasonable hypothesis statements of principles refers to operational, peacekeeping and hazardous service, British nuclear test defence service, and warlike or non-warlike service as those terms are defined in the VEA and the MRCA.

10 See *Vietnam Veterans' Association of Australia (NSW Branch) Inc v Specialist Medical Review Council and Anor* (2002) 69 ALD 553 (Moore J decision) per Moore J at [29].

11 See the full Federal Court decision in *Repatriation Commission v Bey* (1997) 79 FCR 364 which cited with approval these comments from Veterans' Review Board in *Stacey* (unreported 26 June 1985), all of which were in turn cited with approval in the Moore J decision at [33].

12 Relevant service in balance of probabilities statements of principles refers to eligible war service (other than operational service), defence service (other than hazardous service and British nuclear test defence service) and peacetime service as those terms are defined in the VEA and the MRCA.

probable than not. The balance of probabilities test of association between relevant disease and service is less easily satisfied than in a reasonable hypothesis, so if the balance of probabilities test was satisfied, the reasonable hypothesis test must also be met. If, however, the reasonable hypothesis test was not met, the balance of probabilities test could not be met.

16. In these Reasons the association for both the reasonable hypothesis test (at [14]) and the balance of probabilities test (at [15]) are respectively referred to as the 'relevant association'.

17. Noting that Councillors are appointed to a particular review because of their specialist expertise in the particular condition (in this case, myeloma) and the matters within the scope of the Review, the Council exercises its scientific judgement in weighing the evidence about the relevant association. **Appendix A** sets out further details of the legislative framework for the Review.

SCOPE OF REVIEW AND POOL OF INFORMATION

18. **Appendix C** sets out:

- the Council's preliminary and final decisions on the scope of review;
- the Council's preliminary and final decisions on the pool of information; and
- the steps taken by the Council to discharge its procedural fairness obligations regarding the scope of review and pool of information.

WRITTEN AND COMPLEMENTARY ORAL SUBMISSIONS

19. The Council took into account all the submissions made to it, both written and oral. The Council's summaries of the respective submissions of the Applicant and the Commissions are set out at **Appendix D**.

COUNCIL'S EVALUATION OF THE INFORMATION IN THE POOL

20. The Council noted that myeloma is a rare cancer (prevalence of 4 - 5 of 100,000 [13]), and considered that this was reflected in the low case numbers in the studies in the pool.

21. The Council focussed on the information relevant to those chemicals in scope (see below and the lists at [149] **Appendix C** – Scope of Review), noting that many of the studies did not sufficiently identify specific chemicals but only referred to the class of chemicals (phenoxy acid

[13] Kyle, RA et al 2004, 'Incidence of multiple myeloma in Olmsted County Minnesota: Trend over 6 decades', *Cancer*, vol. 1, no. 11, pp. 2667-74. This information was not available to the RMA, and so was not considered by the Council in determining the matters within the scope of the review.

herbicides). The Council took into account studies with outcomes for phenoxy acid herbicides to the extent that they provided evidence that touched on either or both of:[14]

- Inhaling, ingesting or having cutaneous contact with a phenoxy acid herbicide [from the specified list in Statement of Principles No. 69 of 2012], that is, 2,4-dichlorophenoxyacetic acid (2,4-D), and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T); and
- Inhaling, ingesting or having cutaneous contact with a chemical agent [as specified in Statement of Principles No. 69 of 2012] contaminated by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD);

22. While most of the chemical agents specified in Statement of Principles No. 69 of 2012 as potentially contaminated by TCDD were included in the relevant sound medical-scientific evidence in the pool by reference to the class of chemical to which they belong, the sound medical-scientific evidence did provide outcomes specific to 2,4,5-T (as a phenoxy acid herbicide by itself, and as a chemical agent that is considered to be contaminated by TCDD).

EVALUATION OF ARTICLES TOUCHING ON THE APPLICANT'S CONTENTIONS

23. For the Council, consideration of the statistical data was a necessary, but not a sufficient, consideration of whether the statutory tests were met. The Council, in considering the matters within the scope of the review, evaluated all the studies in the pool of information.[15] The Council, having closely evaluated all the information in the pool, placed particular weight on the articles discussed in detail below.

24. The Council did not focus in its evaluation on those articles that:

- were reviews of available information that the Council has evaluated in these reasons for decisions;

---

14 This distinction between chemical agents and classes of chemicals is discussed in Pahwa, P et al 2012, 'Multiple myeloma and exposure to pesticides: A Canadian case-control study', *Journal of Agromedicine*, vol. 17, pp. 40-50. RMA ID 63194; citing Pahwa, P et al 2009, 'Ethnicity and incidence of Hodgkin Lymphoma in Canadian population, BMC Cancer, vol. 9, no. 141, available at http://www.biomedcentral.com/1471-2407/9/141. Accessed March 15, 2011.

15 In considering the Applicant's contention in this review the Council did not need to consider the reasonable hypothesis test given the Applicant's clarification of his contentions as set out in [8] above. With respect to the possibility of a factor or factors concerning exposure to TCDD in very high doses if the Council concluded that the sound medical-scientific evidence satisfied the balance of probabilities test, it necessarily met the reasonable hypothesis test. If the Council concluded that the sound medical-scientific evidence concerning such an exposure did not satisfy the balance of probabilities test, whether it met the reasonable hypothesis test would require separate consideration.

- did not provide data that the Council could draw conclusions on about the phenoxy acid herbicides or chemicals contaminated by TCDD (as specified) and myeloma;
- had such small numbers of cases of myeloma that the Council could not draw conclusions concerning any associations with myeloma.

25. In the Council's view the Agricultural studies and the Vietnam veteran studies were the most relevant evidence for its consideration of the Applicant's contention that existing factors 6(c) and 6(d) in Statement of Principles No. 69 of 2012 (see [21] above) should be replicated in the same or similar terms in Statement of Principles No. 70 of 2012 (the balance of probabilities Statement of Principles)

Agricultural Studies

26. **Landgren, et al 2009**[16] found that the prevalence of MGUS (monoclonal gammopathy of undetermined significance), a potential precursor of multiple myeloma, was twice that in matched non-applicators in restricted-use pesticide applicators aged over 50 (555 of the 678 study subjects).

27. Insecticides, herbicides and fungicides showed non-significant excess risk, including the herbicide 2,4-D (OR= 1.8, 95% CI 0.7 – 4.8; 33 cases)[17].

28. The Council noted that serum samples were analysed for MGUS, but there was no indication that serum TCDD levels were determined. Self-administered questionnaires were used to assess exposure to pesticides with no specific level of exposure data provided.

29. The Council considered that since no MGUS was detected in applicators aged under 50 (n = 123), and that the prevalence increased with age thereafter to a total of 38/555 subjects, it is not possible to extrapolate these findings to Myeloma, as no cases of myeloma were found.

30. **Eriksson, M et al 1992**[18] compared 275 cases (156 alive and 119 deceased) with confirmed multiple myeloma with controls matched by age, sex and county extracted from the Swedish National Population.

31. Exposure by univariate analysis to phenoxy acids gave a relative risk (RR) = 2.22, 90% CI 1.15 - 4.66 (20 exposed cases)[19].

---

16 Landgren, O et al 2009, 'Pesticide exposure and risk of monoclonal gammopathy of undetermined significance in the Agricultural Health Study', *Blood*, vol. 113, no. 25, pp. 6386-91. RMA ID 58798 / 58816

17 OR = Odds Ratio; CI = Confidence Interval

18 Eriksson, M and Karlsson, M 1992, 'Occupational and other environmental factors and multiple myeloma: A population based case-control study', *British Journal of Industrial Medicine*, vol. 49, pp. 95-103. RMA ID 4548 / 63758

32. On multivariate analysis the authors noted that for phenoxy acid herbicides:

> …risks decreased somewhat, and were non-significantly…increased.[20]

33. In the Council's view the absence of a duration-response relationship and the not significantly elevated risk were important factors, limiting extrapolation from the study.

34. **Mills, PK et al 2005**[21] identified a total of 131 lymphohematopoietic cancers (LHC) diagnosed between 1998 and 2001 in Californian farm workers who had been exposed to pesticides (15 high use chemicals including the herbicide 2,4-D). Each case was compared with five members drawn from the 139,000 ever-members of the United Farm Workers of America matched on age, gender and cancer-free status.

35. The Council noted that for the 20 cases of multiple myeloma (14/94 males, 6/37 females), the authors found no elevated risks from exposure to pesticides, but the data were not further detailed and thus Council assigned little weight to the study. The Council considered that the study does not support an association for 2,4-D with myeloma.

36. **Morris-Brown, et al 1993**[22] provided a population-based case-control study of 173 subjects with multiple myeloma and 650 controls in a farming area in Iowa. The study collected information about exposure to 24 animal insecticides, 34 crop insecticides, 38 herbicides, and 16 fungicides, including whether the chemical agents were mixed, handled, or applied, together with the use of protective equipment.

37. The Council noted that the authors provided data[23] on the specific phenoxy acid herbicides referred to by the Applicant and found no difference in risk for multiple myeloma in farmers who handled:

    a. 2,4-D (35 cases) OR = 1.0; 95% CI 0.6 – 1.6; or

    b. 2,4,5-T (7 cases) OR = 0.9; 95% CI 0.4 – 2.1.

38. The Council regarded this as a well-conducted study with appropriate controls, showing no evidence for an increased prevalence of myeloma in subjects exposed to 2,4-D or 2,4,5-T.

---

19 Ibid Table 1 at p. 98

20 Ibid at p. 101

21 Mills, PK et al 2005, 'Lymphohematopoietic cancers in the United Farm Workers of America 1988-2001', *Cancer Causes & Control*, vol. 16, pp. 823-30. RMA ID 38743

22 Morris-Brown, LM et al 1993, 'Pesticide exposures and multiple myeloma in Iowa men', *Cancer Causes & Control,* vol. 4, pp. 153-6. RMA ID 4552

23 Ibid, Table 2 at p. 154.

39. A French hospital-based case-control study by **Orsi, L et al 2009**[24] conducted in six centres in between 2000 and 2004 amassed 491 cases of lymphoid neoplasm (excluding acute lymphoid leukemia), of which 56 were multiple myeloma.

40. For phenoxy herbicides, in seven exposed subjects (farm workers) the OR for myeloma = 2.6, 95% CI 0.9 - 7.0.

41. The Council noted that the data for phenoxy herbicides, which could include 2,4-D and 2,4,5-T were consistent with, but not strong evidence for an increased risk in that the number of cases was small and the confidence intervals were wide, so decreasing the weight the Council gave to this study.

42. The population-based study Canadian study by **Pahwa, P et al 2006**[25] of DEET (N, N-diethyl-m-toluamide - insect repellent), rubber gloves, sunlight and phenoxy herbicides included 342 cases of multiple myeloma, plus a total of 1506 controls.

43. Exposure to 2,4-D, was not associated with myeloma:

- Characterisation of exposure to 2,4-D in the presence / absence of DEET[26]:
  - 2,4-D, no DEET (29 cases) OR = 1.00 95% CI 0.62 – 1.61;
  - DEET and 2,4-D (51 cases) OR = 1.08 95% CI 0.73 – 1.59.

44. **Pahwa, P et al 2012**[27], re-evaluated in 2012 the 342 cases/1506 controls from their 2006 study and found that for subjects with a cumulative exposure ≥ 10 hours per year, using different statistical analyses and including all 80 cases:[28]

- 2,4-D (for 80 cases) OR = 1.28, 95% CI 0.93 - 1.76.

45. The Council found that an OR of close to 1.0 was not consistent with an association of 2,4-D with or without DEET in the earlier study, and that there was no significant change when data were combined in the later study.

---

24 Orsi, L et al 2009, 'Occupational exposure to pesticides and lymphoid neoplasms among men: results of a French case-control study', *Occupational and Environmental Medicine*, vol. 66, no. 5, pp. 291-8. RMA ID 62271

25 Pahwa, P et al 2006, 'Hodgkin lymphoma, multiple myeloma, soft tissue sarcomas, insect repellents, and phenoxy herbicides', *Journal of Occupational & Environmental Medicine*, vol. 48, pp. 264-74. RMA ID 62390

26 See Table 3 at p. 268.

27 Pahwa, P et al 2012, 'Multiple myeloma and exposure to pesticides: A Canadian case-control study', *Journal of Agromedicine*, vol. 17, pp. 40-50. RMA ID 63194

28 ibid, Table 3 at p. 45.

46. **Pearce et al 1986,**[29] published the second phase of their 1985 New Zealand agricultural workers study and found:

- Among 76 cases of myeloma there was no significant difference regarding exposure to phenoxy herbicides compared with 315 controls:

  OR = 1.3, 95% CI 0.8 – 2.2, 43 cases, *p* value of 0.30.

In Council's view this is a careful study with a large cohort of subjects with myeloma workers at a ratio of 1:4 with controls, and shows no association between exposure to phenoxy herbicides and the prevalence of myeloma.

Manufacturing - Production Studies

47. **'t Mannetje et al 2005**, followed sprayers (n=703) from 1973 to 31 December 2000. The authors classified a total of 699 sprayers as exposed to dioxin and phenoxy herbicides.

48. There were no cases of multiple myeloma in sprayers, against an expected incidence of 0.7 (SMR[30] = 0.0; 95% CI 0.00 – 5.29). Further, the number of deaths for the sprayers' cohort was below that expected, and longer duration of sprayer employment was not associated with higher cancer mortality.

49. For sprayers the authors cited another New Zealand study[31] of nine pesticide applicators for an indicative level of TCDD exposure. That study found an average TCDD serum level of 53 ng/kg lipid (3.0 – 131) compared with control subject levels of 5.6 ng/kg lipid. When the applicators' levels were back extrapolated to1970 the average level was around 300 ng/kg lipid (ng/kg = nanograms per kilogram and is equivalent to 300 parts per trillion (ppt)).

50. In the Council's view, in such a small study no relevant conclusion could be reached. It thus provided no evidence for or against an association between phenoxy herbicide exposure and myeloma, despite the back-extrapolation value of moderately high TCDD levels at the time of exposure.

---

29 Pearce, NE et al 1986, 'Case-control study of multiple myeloma and farming', *British Journal of Cancer*, vol. 54, pp. 493-500. RMA ID 16002

30 SMR = Standard Mortality Ratio

31 Smith, AH et al 1992, 'Serum 2,3,7,8-tetrachlorodibenzo-p-dioxin levels of New Zealand pesticide applicators and their implication for cancer hypothesis', *J Natl Cancer Inst*, vol. 84, pp. 104-8. In 't Mannetje, A et al 2005.

This article was not available to the RMA at the relevant times, and so could only be considered by the Council as new information.

51. **Lynge, E 1998**[32] studied 2119 workers potentially exposed to phenoxy herbicides (2,4-D and MCPA) in two Danish factories over 50 years, between 1947-1993.

52. The authors noted that neither of 2,4-D nor MCPA (2-methyl-4-chlorophenoxyacetic acid) are known to be contaminated with TCDD. The factories produced negligible amounts of 2,4,5-T, which is known to be contaminated with TCDD. The authors stated[33]:

> [This]…study indicates that the manufacture of MCPA, MCPP and 2,4-D does not influence the overall risk of cancer.
>
> …the overall cancer mortality among persons exposed to phenoxy herbicides not potentially contaminated with 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD) was equal to that of their national population.

53. No cases of multiple myeloma in men were identified (expected 1.89), but two cases in women were found (expected 0.44), RR = 4.55, CI 0.5 - 16.5.[34] The authors considered the results for women to be at the borderline of statistical significance saying:

> Two case of multiple myeloma occurred among women in the study. Although there are some indications in the literature for a possible association between exposure to phenoxy herbicides and multiple myeloma, the literature is not consistent. It therefore seems prudent not to over interpret the finding of an excess risk in the Danish study based on two cases.[35]

54. Council agreed with the authors, noting that the higher than expected number in women was not a significant increase, and offset by the much lower than anticipated prevalence in exposed men.

55. **Burns, CJ et al 2001**[36] compared Dow chemical workers potentially exposed to 2,4-D between 1945-1996 with 40,000 other company employees working at the same location. The analysis was confined to men, (1517 males, 39,799 person years, 330 deaths). Fewer deaths than expected were found either due to all causes or to malignant neoplasms.

56. Myeloma mortality (RR = 0.8, CI 0.02 - 4.46) was not elevated in the workers exposed to 2,4-D.

---

32 Lynge, E 1998, 'Cancer incidence in Danish phenoxy herbicide workers, 1947-1993', *Environmental Health Perspectives*, vol. 106, suppl. 2, pp. 683-688. RMA ID 25132 17285

33 Ibid, at p. 686-687.

34 ibid, Table 4, p.685

35 ibid, p.687

36 Burns, CJ et al 2001, 'Mortality in chemical workers potentially exposed to 2,4-dichlorophenoxyacetic acid (2,4-D) 1945-94: an update', *Occupational and Environmental Medicine*, vol. 58, pp. 24-30. RMA ID 24760 26080

57. In the Council's view this is a major study with over 1500 potential 2,4-D exposed workers compared with a ≥ 25 fold larger control group on the same sites. The finding that the prevalence of myeloma was not different between the two groups provides no evidence for an association between 2,4-D exposure and myeloma.

Vietnam Veterans' Study

58. **Ketchum, NS et al 1999**[37] compared Ranch Hand Vietnam veterans with matched (age, race, military operations) non-exposed veterans. Dioxin was measured in parts per trillion (ppt), and adjusted values determined on a half-life of 8.7 years. No subject in the comparison group (n = 1,275; Dioxin (ppt) median 4.0, range 0 - 10) had myeloma; two subjects in the low exposure group (n = 276; Dioxin (ppt) median 52.3, range 27 - 94) had myeloma; but none in the high exposure (n = 283; Dioxin (ppt) median 196, range 94 – 3,290) or background (n = 421; Dioxin (ppt) median 5.7, range 0 - 10) groups had myeloma.

59. The authors stated:

> No association was found between any cancer (all sites and any type) and dioxin category…Counts of veterans with specific cancers [including myeloma], all of which were too small to analyse are shown in table 5.[38]
>
> Overall we found no consistent evidence of a dose-response gradient and no significant increase in cancer risk in the high dioxin exposure category, the subgroup of highest a priori interest. [39]

60. Based on the authors' conclusions, the Council did not consider that this study supported the relevant association.

COUNCIL'S CONCLUSIONS ON ARTICLES TOUCHING ON THE APPLICANT'S CONTENTIONS

61. In the Council's view the agricultural studies and production studies (above) in the pool were the studies most relevant to the Applicant's contention. The Applicant contended that existing factors 6(c) and 6(d) in Statement of Principles No. 69 of 2012 concerning inhaling, ingesting or having cutaneous contact with:

    – a phenoxy acid herbicide [from the specified list in Statement of Principles No. 69 of 2012], that is, 2,4-dichlorophenoxyacetic acid (2,4-D), and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T); and/or

---

37 Ketchum, NS et al 1999, 'Serum dioxin and cancer in veterans of operation ranch hand', *American Journal of Epidemiology*, vol. 149, no. 7, pp. 630-639. RMA ID 16739

38 Ibid, p. 635.

39 Ibid, at p.638.

- a chemical agent [as specified in Statement of Principles No 69 of 2012] contaminated by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD);

should be replicated in the same or similar terms in Statement of Principles No. 70 of 2012 (the balance of probabilities Statement of Principles).

62. The Council considered that the same evidence was the most relevant to, and the most likely to provide data on, the level of exposure to TCDD, as contended by the Applicant, i.e. an exposure to TCDD produced by decanting, mixing and spraying chemical agents and/or by consuming food potentially contaminated by those same chemical agents.

63. The Council noted the Commissions' submission (see [184] to [220]) that the sound medical-scientific evidence for the phenoxy herbicide 2,4,5-T and TCDD collectively, or for TCDD alone, was limited, and did not satisfy the balance of probabilities test. In regard to phenoxy herbicides the Commissions submitted that 2,4,5-T was contaminated with TCDD and submitted further that they could not find any direct evidence for 2,4-D exposure being associated with myeloma.

64. The Council understood that the Applicant's submission (see [172] to [183]) was that the Council should apply the possible links in the evidence, such as the findings by the US Institute of Medicine described in its Veterans and Agent Orange series as 'limited or suggestive evidence' as meeting the balance of probabilities standard of proof. The Council considered that that was not a correct application of the balance of probabilities test.[40] Further, the Council considered that the sound medical-scientific evidence did not satisfy the balance of probabilities test.

65. The Council noted that while some studies produced an OR > 1.0 this was not a statistically significant increase. Many studies, including some with a relatively high number of cases of myeloma, found no evidence for any association. The Council was of the view that the overall combined effect of the studies with outcomes for the chemical agents specified in existing factors 6 (c) and 6 (d) of Statement of Principles No. 69 of 2012 (see [61] above and Appendix C and [149]) by:

- Landgren et al 2009 (2,4-D);
- Eriksson & Karlsson 1992, (phenoxy herbicides);
- Morris-Brown et al 1993, (2,4-D and 2,4,5-T);
- Orsi et al 2009, (phenoxy herbicides);

40 Noting that the reasonable hypothesis test was not within scope in so far as the Applicant's contentions were concerned.

- Pahwa et al 2012, (phenoxy herbicides; 2,4-D);
- Pearce et al 1986 (phenoxy herbicides);
- ‘t Mannetje et al 2005, (mortality in sprayers - TCDD);
- Lynge, E 1998 (2,4-D and 2,4,5-T); and
- Burns, CJ et al 2001 (2,4-D)
- Ketchum, NS et al 1999 (sprayers Vietnam - TCDD)

did not satisfy the balance of probabilities test for clinical onset of myeloma.

66. The evidence concerning phenoxy herbicides for farmers covering occupational exposure of handlers, applicators and sprayers was in the Council’s view most consistent with a positive association. However in the Council's view the combined effect of these studies (noted below) did not satisfy the balance of probabilities test:

- Eriksson & Karlsson 1992;
- Orsi et al 2009;
- Pearce et al 1986.

67. In conclusion, the Council considered that the information available to the RMA at the relevant times touching on the Applicant's contentions was insufficient to justify an amendment to Statement of Principles No. 70 of 2012 (the balance of probabilities Statement), to include factors for low level exposure by agricultural workers and sprayers or at all to:

b. Inhaling, ingesting or having cutaneous contact with a phenoxy acid herbicide [from the specified list in Statement of Principles No. 69 of 2012], that is, 2,4-dichlorophenoxyacetic acid (2,4-D), and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T); and/or

c. Inhaling, ingesting or having cutaneous contact with a chemical agent [as specified in Statement of Principles No. 69 of 2012] contaminated by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD).

EVALUATION OF ARTICLES TOUCHING ON THE COUNCIL'S REVIEW CONCERNING VERY HIGH DOSE EXPOSURE TO TCDD

Manufacturing Studies

Seveso industrial accident studies[41]

68. An industrial accident in a chemical plant which manufactured pesticides and herbicides in Seveso, Italy in 1976, resulted in the release of 2,900 kg of matter in a cloud containing several kilograms of TCDD. No immediate fatalities were reported, but land and vegetation were contaminated; more than 600 people were evacuated from their homes with up to 2000 people treated for dioxin poisoning.

> [The accident]…in the trichlorophenal production department of a chemical plant….A chemical cloud containing several kilograms of TCDD was released into the environment and contaminated a vast and densely populated area.[42]

Consonni, D et al 2008 describe TCDD as:

> The most toxic member of a large family of poly-chlorodibenzodioxins is 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), a non-wanted by-product of numerous chemical reactions involving chlorine compounds, highly persistent in the environment and biologic organisms…[43]

69. The Council identified six main studies relating to this accident that examined cancer incidence and mortality covering a 25-year follow-up period. The area of Seveso was divided into three dioxin contaminated zones of decreasing mean soil levels:

A = highest exposure to dioxin

B = the next, and

---

41 **Bertazzi, PA et al 1993**, 'Cancer incidence in a population accidentally exposed to 2,3,7,8-Tetrachlorodibenzo-para-dioxin', *Epidemiology*, vol. 4, no. 5, pp. 398-406. RMA ID 25081

Bertazzi, PA et al 1997, 'Dioxin exposure and cancer risk: a 15-year mortality study after the Seveso Accident', *Epidemiology*, vol. 8, no. 6, pp. 646-652. RMA ID 25609

Bertazzi, PA et al 1999, [extended ABSTRACTS] 'Dioxin exposure and human leukemias and lymphomas. Lessons from the Seveso accident and studies on industrial workers', *Leukemia*, vol. 13, suppl. 1, pp. S72-S74. RMA ID 22514

Bertazzi, PA et al 2001, 'Health effects of dioxin exposure: a 20-year mortality study', *American Journal of Epidemiology*, vol. 153, no. 11, pp. 1031-1044. RMA ID 25817

Pesatori, AC et al 2009, 'Cancer incidence in the population exposed to dioxin after the "Seveso accident": twenty years of follow-up', *Environmental Health*, vol. 8, no. 39. RMA ID 63465

Consonni, D et al 2008, 'Mortality in a population exposed to dioxin after the Seveso, Italy accident in 1976: 25 years of follow-up', *American Journal of Epidemiology*, vol. 167, no. 7, pp. 847-58. RMA ID 55675

42 Consonni, D et al 2008 at p. 848

43 Consonni, D et al 2008 at p. 847

R = the lowest level of contamination.

The population of the surrounding non-contaminated area was used as a reference group.

70. Bertazzi, PA et al 1993 noted in relation to dose for zone A, that:

> Information on TCDD blood levels was available for few subjects. Ten children from zone A affected by chloracne (an established marker of TCDD toxicity) showed lipid-adjusted blood levels as high as 56,000 parts per trillion (ppt). Nine adults without chloracne, from the same area, showed values ranging from 1,770 ppt to 10,400 ppt.[44]

71. For zone B the authors reported a range for a limited group of 13 subjects:

> .. results for a group of 13 subjects from zone B have become available; their blood concentrations ranged from 74 to 526 ppt.[45]

72. Bertazzi AB et al 2001 provided a more detailed summary of the level of contamination of the soil related to the equivalent levels of serum dioxin in residents of each zone provided relevant information[46]:

Zone		Soil TCDD ($\mu g/m^2$) Minimum - Maximum	Serum TCDD no. of subjects	Median (ppt)
A	1976	15.5 - 580.4	296§	447.0
	1993-4		7¶	73.3
B	1976	1.7 – 4.3	80§	94.0
	1993-4		51¶	12.4
R	1976	0.9 – 1.4	48§	48.0
Reference Zone	1993-4	n.a*	52¶	5.5

***** TCDD, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin; NA, not available.; § Samples collected in 1976–1977; reference 33.; ¶ Samples collected in 1993–1994; reference 34.

Source: Bertazzi AB et al 2001, Table 1 at p. 1032.

73. The Council observed that there was high agreement between exposure, soil contamination and serum blood levels for dioxin. Further, the Council noted that the chemicals, other than dioxin (detailed below) that were measured in the blood tests, did not reach above background levels

44 Bertazzi, PA et al 1993 at p. 399

45 ibid at p. 399

46 Pesatori, AC et al 2009, Table 1 at p. 3.

> The serum levels of six other PCDDs [polychlorinated dibenzo-dioxins], 10 PCDFs [polychlorinated dibenzo-furans], and four coplanar PCBs [polychlorinated biphenyls] were also measured…[47]

74. These two factors convinced the Council that exposure to TCDD was the only relevant chemical agent of exposure.

75. The Council expected that there would be a delay in the observation of disease and death and hence considered the follow-up studies that provided cumulative incidence and mortality data to be the most relevant.

Seveso Incidence Studies

76. The Council considered two incidence studies conducted by Bertazzi, et al 1993**[48]**, and Pesatori et al 2009[49].

77. In the first of the papers, **Bertazzi, et al 1993** described the incidence of cancer at the 10 year point following the incident and showed a statistically significant increased risk of myeloma for women in Zone B[50]

- for women (2 cases; RR = 5.3, 95% CI 1.2 – 22.6),
- but for men (2 cases; RR = 3.2, 95% CI 0.8 – 13.3).

78. The 20 year follow up incidence study by **Pesatori et al 2009** found cases of myeloma for the period 1977 – 1996 as follows:

- Zone A - 1 case
  RR = 2.88 95% CI 0.40 – 20.70
- Zone B - 6 cases
  RR = 2.77 95% CI 1.20 - 6.32
- Zone R - 18 cases
  RR = 1.15 95% CI 0.70 - 1.91

79. In the Results section, in reference to cancer incidence from the time of the accident, the 2009 study authors noted:

> Steadily increased risks for multiple myeloma were observed in each category [0-4 yrs, 5-9, 10-14 and 15+ years] within 15 years since the accident.[51]

---

47 Pesatori, AC et al 2009 at p. 2 of 11.

48 Bertazzi, PA et al 1993, 'Cancer incidence in a population accidentally exposed to 2,3,7,8-Tetrachlorodibenzo-para-dioxin', Epidemiology, vol. 4, no. 5, pp. 398-406. RMA ID 25081

49 ibid Table 3 at p.6

50 The Bertazzi et al 1993 provided no data for myeloma incidence in Zone A, and for Zone R,

- for women (2 cases; RR = 0.6, 95% CI 0.2 – 2.8),
- for men (1 case; RR = 0.2, 95% CI 0.0 – 1.6).

and

> In zone R, a numerical increase of the RR values with time since initial exposure was observed: however, none of the values was significantly above unity with the exception of multiple myeloma after 15 years since the accident.[52]

Seveso Mortality Studies

80. Mortality studies by **Bertazzi et al 1997** and **Bertazzi et al 1999** at 15 years, **Bertazzi et al 2001** at 20 years and **Consonni et al 2008** at 25 years were also considered.

81. The Council noted that the 15 year follow-up mortality study by **Bertazzi et al 1997** (for the period 1976-1991), identified that in:[53]

> Zone B; the excess of cases became significant for
>
> women (4 deaths) RR = 6.6, 95% CI 1.8 - 16.8,
>
> but not for men (1 death) RR = 1.1, 95% CI 0.0 - 6.2.

The authors noted that:

> Multiple myeloma excess risk occurred among zone B females, with an increasing trend by latency and length of stay in the area; previous studies support its association with dioxin exposure.

82. The Bertazzi et al 2001, 20 year mortality study (for the period 1976-1996) reported no further deaths since those reported in the Bertazzi et al 1997 study, above. The authors commented:

> In zone B, nearly twice as many as expected lymphohemopoietic neoplasms occurred, a significant increase that in particular included Hodgkin's disease, multiple myeloma, and myeloid leukemia.[54]

83. The 25 year follow up mortality study by **Consonni et al 2008** for the period 1976 – 2001[55] detailed results for myeloma deaths as follows:

- Zone A - 2 myeloma deaths

---

51 Pesatori, AC et al, 2009, p. 6 and Table 4 at p. 7-8.

52 Pesatori, AC et al, 2009, p. 6

53 The Bertazzi et al 1997 data for the other zones is:

Zone A; there had been no deaths from multiple myeloma; and

Zone R; for women (5 deaths) RR = 1.0, 95% CI 0.3 - 2.3, and for men (5 deaths) RR = 0.8, 95% CI 0.3-1.9.

54 Bertazzi, PA et al 2001, p. 1033

55 Consonni, D et al 2008, Table 5 at p.851

RR = 4.34 95% CI 1.07 - 17.52

- Zone B – 5 deaths
  RR = 1.68 95% CI 0.69 - 4.10
- Zone R – 24 deaths
  RR = 1.1 95% CI 0.71 - 1.69

84. The authors commented that:

> …the most notable finding was increased mortality from cancers of the lymphatic and hematopoietic tissues in the two most polluted zones, with a significant (p = 0.04) test for trend of rate ratios across zones (A > B > R).[56]

and noted that:

> The increases were stronger for females … **myelomas** (zone B: four deaths, RR = 3.07, 95 percent CI: 1.12, 8.42).[57]

85. The Bertazzi et al 2001 at 20 years and Consonni et al 2008, at 25 years mortality studies reported no further deaths for Zone B than were reported in the Bertazzi et al 1997 study, above. In contrast, the Council considered that the Consonni et al 2008, 25-year follow-up study (see [80] above) showed statistically significant increased risk in Zone A.

86. In the Council's view, incidence and mortality data from all the Seveso studies (particularly when combined for Zones A and B, the most contaminated zones), and the data that reached significance, supported the relevant association for high doses of dioxin.

87. Taken together these Seveso incidence and mortality studies also provide data on the high level of dioxin exposure at which an association with myeloma was evident. As mentioned above [76], in relation to dose for zone A, the authors noted levels as high as 56,000 ppt in children and 1,700 to 10,400 ppt in some adults.[58] And in Zone B results were available for a small number of subjects, showing a range from 74 to 526 ppt.[59].

88. The Council considered the series of Seveso studies provided evidence of a strong association for very high exposure to TCDD and myeloma. In support of such an association were statistically significant results in Zones A and B for both incidence and mortality. The mean soil and median serum TCDD data were in agreement (high to low levels) and the blood tests showed TCDD was the only chemical agent above background levels. Zone A provided evidence on the exposure dose with adult values ranging from 1,770 ppt to 10,400 ppt of TCDD in blood serum.

---

56 Consonni, D et al 2008, p. 850

57 Consonni, D et al 2008, p. 850

58 Bertazzi, PA et al 1993 at p. 399

59 ibid at p. 399

89. Important in the Council's view were:

- the data for an increased risk of myeloma;
- the incidence dose-positive relationship and incidence versus time positive relationship; and
- that the results were both scientifically and statistically significant.

Other industrial accident study

90. The Council considered the **Hooiveld, M et al 1998**[60] to be an important study, as some of the workers were exposed to chemical agents from an accident, some through production of chemical agents, and a non-exposed group. In the Council's view, this study provided data on different dose levels of TCDD in response to different levels of exposure.

91. The period studied was 1955-85 (all employees over all or part of that period): 562 subjects were exposed, and 567 non-exposed. The authors found an increased incidence of cancer in Dutch chemical plant workers exposed to phenoxy herbicides, chlorophenols and contaminants (TCDD and other polychlorinated dioxins and furans). Levels of serum TCDD were established in 47 subjects (14 exposed to an accident, 17 exposed elsewhere, and 16 non-exposed).

92. Levels of serum TCDD in the first group (accident) were higher than in the second (exposed, no accident), and the second was higher than the third (non-exposed):

> Extrapolated serum TCDD max concentrations (on lipid-adjusted basis) had a nonnormal, right-skewed distribution and ranged between a geometric mean of 40.8 ppt in exposed workers in nonproduction departments to a geometric mean of 2,148.0 ppt in workers exposed as a result of the accident and working in main production[61].

93. The Council noted that any increased mortality was for 'all cancers', not from myelomas. However, in the Council's view the exposure dose data, as measured by serum lipid TCDD levels, supported very high dose levels for workers exposed by the accident (exposure to polychlorinated dioxins, including TCDD) and similar TCDD dose levels for workers in main production, but not for exposed workers with no main production work (both exposed to phenoxy herbicides or chlorophenals contaminated with TCDD), and not for those non-exposed workers.

94. Further, the relevant exposure to a very high dose was in the order of a mean of 2,148 ppt of TCDD in blood serum (lipid adjusted). The Council

---

60 Hooiveld, M et al 1998, 'Second follow-up of a Dutch cohort occupationally exposed to phenoxy herbicides, chlorophenols, and contaminants', *American Journal of Epidemiology*, vol. 147, no. 9, pp. 891-901. RMA ID 24770 26075

61 p. 894

noted that this very high dose was similar to the 1,770 ppt of TCDD lower end value of the range for Zone A adults in the Seveso studies (See [88]).

95. Despite 14 subjects being exposed to the accident, resulting in a high mean dose of TCDD ≈ 2000 ppt serum, there were no cases of myeloma in those subjects. In the Council's view, this is consistent with the rarity of the disease and reflecting the small number of exposed subjects. .

96. The Council's view was that this study provides some evidence for levels of TCDD in serum which might result from an accidental exposure but reflecting the small number of exposed subjects, it did not contribute to the Council's view about the association of onset of myeloma.

Other Manufacturing - Production Studies

97. The Council considered a number of studies that were available to the RMA concerning workers exposed to a range of pesticides and herbicides including phenoxy herbicides, chlorophenols and contaminants such as TCDD and other polychlorinated dioxins in the manufacturing process. The Council considered these studies were important, given the data from the Seveso studies, in identifying any potential relevant association for TCDD, and particularly if that were so, the level of exposure (given workers' employment over a number of years and the dose at which any association was shown).

98. **Steenland, K et al 1999**[62] studied 5132 workers at 12 U.S. chemical plants that produced (1942 - 1984) TCDD contaminated chemicals (including Agent Orange (50:50 mixture of 2,4-D and 2,4,5,-T). Exposure was measured by the presence of TCDD in process material, a job-exposure matrix (time spent in specific jobs) and estimates on potential exposure by cutaneous contact or inhaling of TCDD. Serum dioxin evaluations were used to estimate cumulative exposure levels.

99. The authors found 377 deaths from all cancers:

RR = 1.13 CI 1.02 - 1.25; and

of these multiple myeloma accounted for 10 cases:

RR = 2.07 CI 0.99 - 3.80

100. In relation to dose, Steenland et al noted that in the largest of the four industrial cohorts considered by the IARC study in the US:

---

62 Steenland, K et al 1999**, '**Cancer, heart disease, and diabetes in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin', *Journal of the National Cancer Institute*, vol. 91, no. 9, pp. 779-86. RMA ID 24794 25814

workers were exposed to high levels of TCDD. Blood drawn from a sample of these workers (n = 253) indicated an estimated mean serum level of 2000 parts per trillion in lipids at the time of last exposure compared with six to eight parts per trillion for the general population.[63]

101. The Council noted the elevated risk for myeloma above was in relation to production workers for exposure to chemicals contaminated by TCDD, where the mean serum level (dose) of 2000 ppt of TCDD was in a similar order to the lower range value (1,770 ppt to 10,400 ppt) for adults in the most contaminated zone A in the Seveso studies. The Council initially concluded from the mean value in the Steenland study and the range value from the Seveso studies that a serum blood level for TCDD in the vicinity of 2000 ppt would be required for the relevant association.

- In the Council's view the data were based on a high number of cases (10/5132 is very high for such a rare cancer). The RR showed a doubling of risk and was supportive of an association between very high dose (see above) exposure to TCDD and Myeloma.

102. The following two studies by **'t Mannetje, A et al 2005 and McBride, DI et al 2009**[64] provided a comparison between the levels of potential exposure to TCDD by manufacturing production workers and agricultural sprayers. However, a range of other chemicals were also manufactured at the plant in question, which raises doubt about the weight the Council could assign to the results.

103. Both 2,4,5-T trichlorophenol (TCP) and TCDD were manufactured in New Plymouth, New Zealand from 1962 to 1988. The mortality rates of the workers at the site were compared to standard mortality in the background population.

104. **'t Mannetje et al 2005**, followed production workers (n=1025) from 1969 to 31 December 2000. The authors classified a total of 813 producers as exposed to dioxin and phenoxy herbicides.

105. The authors reported what they considered to be "a significant excess for multiple myeloma" with three multiple myeloma deaths in the producers' cohort against an expected number of 0.5 resulting in an SMR of 5.51 (95% CI 1.14 - 16.1).

---

63 Ibid, at p. 779

64 **'t Mannetje, A et al 2005, '**Mortality in New Zealand workers exposed to phenoxy herbicides and dioxins', *Occupational and Environmental Medicine*, vol. 63, no. 34-40. RMA ID 34856

McBride, DI et al 2009, 'Mortality in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin at a trichlorophenol plant in New Zealand', *Journal of Occupational & Environmental Medicine*, vol. 51, no. 9, pp. 1049-56. RMA ID 24922 / 56055

> Two cases had worked in packing and transport and one had worked in an unspecified exposed department. Including these three cases, in total five lymphohematopoietic cancer deaths occurred in the producers cohort (SMR =1.65, 95% CI 0.53 to 3.85)[65]

106. **McBride et al 2009** studied the same cohort as 't Mannetje et al 2005. They found in exposed workers (n=1134, 196 deaths) two cases of multiple myeloma representing a SMR = 2.2 (95% CI 0.2 - 8.1), which the authors stated were greater than expected. There were 51 deaths among 465 non-exposed workers, but none from multiple myeloma.

107. Serum TCDD levels were collected from 22% of the study cases.

> The current serum lipid adjusted TCDD levels for workers with exposure to TCP [2,4,5-trichlorophenol] or 2,4,5-T averaged 9.9 ppt. The highest levels were found in the TCP operation (23.4 ppt), particularly those involved in a release in 1986 (37.9 ppt). The unexposed workers averaged 4.9 ppt, which was very close to what would be considered New Zealand background level of 3.9 ppt for persons of similar age.[66]

108. The Council noted that the study by McBride et al 2009 listed only two multiple myeloma deaths in the same cohort compared with three identified by 't Mannetje et al 2005, suggesting that one case in the 't Mannetje et al 2005 study was misclassified.

109. The Council considered that 't Mannetje and McBride did not provide significant evidence but the studies leave open the possibility of relevant association for TCDD with myeloma (see [47]).

COUNCIL'S CONCLUSIONS ON ARTICLES FOR VERY HIGH DOSE EXPOSURE TO TCDD

110. Having evaluated all the evidence in the pool, the Council was of the view that the combined effect of the studies concerning high doses of TCDD by:

- Seveso studies
  - Bertazzi, PA et al 1993
  - Bertazzi, PA et al 1997
  - Bertazzi, PA et al 1999
  - Bertazzi, PA et al 2001
  - Pesatori, AC et al 2009
  - Consonni, D et al 2008

65 't Mannetje, A et al 2005 at p. 37

66 Ibid, at p. 1050-1051.

And

– Steenland, K et al 1999.

pointed to the relevant association for clinical onset of myeloma.

111. Still regarding high doses, the Council was of the view that the combined effect of the studies concerning TCDD by:

- The Seveso studies:

    - Bertazzi, PA et al 1993
    - Bertazzi, PA et al 1997
    - Bertazzi, PA et al 1999
    - Bertazzi, PA et al 2001
    - Pesatori, AC et al 2009
    - Consonni, D et al 2008

And

– Steenland, K et al 1999

satisfy the relevant association on the balance of probabilities, when considered with all the other evidence in the pool.

112. Overall the Council noted that these studies, which detailed TCDD concentrations in plasma lipids/serum, supported an association for very high doses of TCDD exposure only.

113. The Council considered it important that the Seveso studies found an excess risk up to six -fold, following a chemical accident, which was statistically significant for myeloma, in the most highly exposed Zones A and B.

114. In addition, the study by Steenland et al 1999 found 10 cases of multiple myeloma in U.S. pesticide manufacturers (RR = 2.07; CI 0.99-3.80), which the Council considered was highly suggestive of an association, and close to but not statistically significant for high doses.

DOSE

115. In considering what threshold dose of TCDD would be supported by the sound medical-scientific evidence, the Council noted in particular that the studies detailing TCDD concentrations in lipids or serum, supported an association for very high doses of TCDD exposure only. While not many studies included blood TCDD level evaluation, the following data remained persuasive for only a very high dose (industrial accident and manufacturing

chemical production) exposure being potentially relevant to any relevant association with myeloma.

- Steenland et al 1999[67] found a high concentration mean in myeloma cases based on concentration of TCDD of about 2000 ppt in lipids.

- Bertazzi et al 1993, Pesatori et al 2009 found shortly after the accident that Zone A had a median serum concentration of 447 ppt, but that nine adults had 1,770 ppt to 10,400 ppt.

- Hooiveld et al 1998 found an (extrapolated) geometric mean of 2,148 ppt (95%CI 1375-3,355) of TCDD in workers exposed.[68]

116. The TCDD blood levels measured in t;Mannetje et al 2005 and Ketchum et al 1999 for agricultural workers and Vietnam veterans, were only moderately elevated, and no increased risk was detected.

- 't Mannetje et al 2005 found that sprayers / pesticide applicators had average concentrations of around 300 ng/kg lipid (back extrapolated to the approximate time of exposure).

- Ketchum et al 1999 found for Vietnam Ranch Hand veterans that the highest exposed group had a median TCDD level of 196 ppt, in the range 94 – 3,290 ppt. As in the Hooiveld study, no cases of myeloma were detected at the highest TCDD concentrations.

117. Overall, based on the above evaluation of the studies and its consideration of all submissions, the Council believes that, on the balance of probabilities, there is sound medical-scientific evidence connecting TCDD exposure at very high levels (in the vicinity of 2000 ppt), with myeloma. The Council noted that the half life of TCDD in serums and lipids ranges from 7 to 8.7 years, and that it is reported that TCDD levels in control subjects is approximately 5 ppt.

118. After considering comments submitted by the Applicant and the Commissions on the Council's proposed factors[69], the Council decided that a minimum threshold of at least 1500 ppt at the time of exposure would provide an acceptable margin to allow for individual variances such as gender and body type.

119. The Council also considered that a serum TCDD level of at least 1500 ppt allows for the successful inference by back-extrapolation some decades after exposure, and is consistent with the sound medical-scientific evidence from the studies set out above.

---

68 p. 894

69 See **Appendix C** under Revised Scope and Proposed Factor

120. In the Council’s view the sound medical-scientific evidence was sufficient for exposure at the dose discussed above to be applied to both the reasonable hypothesis and balance of probabilities statements of principles.

DECISION

121. On this basis, the Council decided that having exposure to 2,3,7,8 tetrachlorodibenzo-para-dioxin (TCDD) sufficient to produce an expected initial serum TCDD level of at least 1500 parts per trillion before the clinical onset of myeloma is sufficient to satisfy the balance of probabilities for association between TCDD at very high doses and the subsequent onset of myeloma.

122. The Council made the declarations summarised in paragraphs 1 and 2 above.

COUNCIL’S VIEW ON THE NEW INFORMATION SUBMITTED BY THE APPLICANT

123. Given the Council's decision, it was of the view that there was no need for it to consider any of the 'new information' with respect to the contended factors in order to form a view as to whether any directions or recommendations should be made to the RMA.

EVIDENCE THAT THE COUNCIL COMMENTS ON

Agricultural Studies

Landgren, O et al 2009, 'Pesticide exposure and risk of monoclonal gammopathy of undetermined significance in the Agricultural Health Study', *Blood*, vol. 113, no. 25, pp. 6386-91. RMA ID 58798 / 58816

Eriksson, M Karlsson, M 1992, 'Occupational and other environmental factors and multiple myeloma: A population based case-control study', *British Journal of Industrial Medicine*, vol. 49, pp. 95-103. RMA ID 4548 / 63758

Mills, PK et al 2005, 'Lymphohematopoietic cancers in the United Farm Workers of America 1988-2001', *Cancer Causes & Control*, vol. 16, pp. 823-30. RMA ID 38743

Morris-Brown, LM et al 1993, 'Pesticide exposures and multiple myeloma in Iowa men', *Cancer Causes & Control*, vol. 4, pp. 153-6. RMA ID 4552

Orsi, L et al 2009, 'Occupational exposure to pesticides and lymphoid neoplasms among men: results of a French case-control study', *Occupational and Environmental Medicine*, vol. 66, no. 5, pp. 291-8. RMA ID 62271

Pahwa, P et al 2006, 'Hodgkin lymphoma, multiple myeloma, soft tissue sarcomas, insect repellents, and phenoxy herbicides', Journal of Occupational & Environmental Medicine, vol. 48, pp. 264-74. RMA ID 62390

Pahwa, P et al 2012, 'Multiple myeloma and exposure to pesticides: A Canadian case-control study', Journal of Agromedicine, vol. 17, pp. 40-50. RMA ID 63194

Pearce, NE et al 1986, 'Case-control study of multiple myeloma and farming', British Journal of Cancer, vol. 54, pp. 493-500. RMA ID 16002

Manufacturing Studies

't Mannetje, A et al 2005, 'Mortality in New Zealand workers exposed to phenoxy herbicides and dioxins', Occupational and Environmental Medicine, vol. 63, no. 34-40. RMA ID 34856

Lynge, E 1998, 'Cancer incidence in Danish phenoxy herbicide workers, 1947-1993', Environmental Health Perspectives, vol. 106, suppl. 2, pp. 683-688. RMA IDs 25132 &17285

Burns, CJ et al 2001, 'Mortality in chemical workers potentially exposed to 2,4-dichlorophenoxyacetic acid (2,4-D) 1945-94: an update', Occupational and Environmental Medicine, vol. 58, pp. 24-30. RMA IDs 24760 & 26080

Seveso studies

Bertazzi, PA et al 1993, 'Cancer incidence in a population accidentally exposed to 2,3,7,8-Tetrachlorodibenzo-para-dioxin', Epidemiology, vol. 4, no. 5, pp. 398-406. RMA ID 25081

Bertazzi, PA et al 1997, 'Dioxin exposure and cancer risk: a 15-year mortality study after the Seveso Accident', Epidemiology, vol. 8, no. 6, pp. 646-652. RMA ID 25609

Bertazzi, PA et al 1999, 'Dioxin exposure and human leukemias and lymphomas. Lessons from the Seveso accident and studies on industrial workers', Leukemia, vol. 13, suppl. 1, pp. S72-S74. RMA ID 22514

Bertazzi, PA et al 2001, 'Health effects of dioxin exposure: a 20-year mortality study', American Journal of Epidemiology, vol. 153, no. 11, pp. 1031-1044. RMA ID 25817

Pesatori, AC et al 2009, 'Cancer incidence in the population exposed to dioxin after the "Seveso accident": twenty years of follow-up', Environmental Health, vol. 8, pp. 39. RMA ID 63465

Consonni, D et al 2008, 'Mortality in a population exposed to dioxin after the Seveso, Italy accident in 1976: 25 years of follow-up', American Journal of Epidemiology, vol. 167, no. 7, pp. 847-58. RMA ID 55675

Manufacturing – industrial accident and production Study

Hooiveld, M et al 1998, 'Second follow-up of a Dutch cohort occupationally exposed to phenoxy herbicides, chlorophenols, and contaminants', American Journal of Epidemiology, vol. 147, no. 9, pp. 891-901. RMA IDs 24770 & 26075

Manufacturing Studies

Steenland, K et al 1999, 'Cancer, heart disease, and diabetes in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin', Journal of the National Cancer Institute, vol. 91, no. 9, pp. 779-86. RMA IDs 24794 & 25814

McBride, DI et al 2009, 'Mortality in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin at a trichlorophenol plant in New Zealand', Journal of Occupational & Environmental Medicine, vol. 51, no. 9, pp. 1049-56. RMA ID 24922 / 56055

Vietnam Veterans Studies

Ketchum, NS et al 1999, 'Serum dioxin and cancer in veterans of operation ranch hand', American Journal of Epidemiology, vol. 149, no. 7, pp. 630-639. RMA ID 16739

APPENDICES

APPENDIX A: THE CONSTITUTED COUNCIL AND LEGISLATIVE FRAMEWORK OF THE REVIEW

The Specialist Medical Review Council

124. As mentioned in [3], the Council is a body corporate established under section 196V of the VEA. It consists of such number of members as the Minister for Veterans' Affairs determines from time to time to be necessary for the proper exercise of the function of the Council as set out in the VEA. When appointing Councillors, the Minister is required to have regard to the branches of medical-science that would be necessary for deciding matters referred to the Council for review.

125. The composition of each Review Council changes from review to review depending on the issues relevant to the particular Statement/s of Principles under review. When a review is undertaken three to five Councillors selected by the Convener constitute the Council.

126. The Minister must appoint one of the Councillors to be the Convener. If the Council does not include the Convener, the Convener must appoint one of the Councillors selected for the review to preside at all meetings as Presiding Councillor.

127. Professor John Funder was the Presiding Councillor for this review. He is a Senior Fellow at Prince Henry's Institute of Medical Research at Monash Medical Centre, and holds honorary professorial appointments at Monash, Melbourne University and the University of Queensland. He has been President of the Australian Society for Medical Research (1979) and the Endocrine Society of Australia (1984), and Chairman of the International Society for Endocrinology (1996-2000).

128. The other members of the Council were:

- Professor Lin Fritschi, who is Professor of Epidemiology at Curtin University in Western Australia. She holds a National Health and Medical Research Council Senior Research Fellowship. Her research interests include cancer epidemiology, occupational causes of cancer, and exposure assessment in epidemiological studies.

- Professor Doug Joshua, who is the Alan Ng Professor of Haematology at the University of Sydney and was until January 2014 Head of the Haematology Department of the Royal Prince Alfred Hospital and Concord Hospital, returning to the Royal Prince Alfred Hospital as a consultant from 1 April 2014. Professor Joshua is a scientific advisor and member of the International Myeloma Foundation.

– Dr Hang Quach, who is a consultant clinical and laboratory haematologist at St Vincent's Hospital, Melbourne, a Clinical Fellow of the University of Melbourne and Member of the International Myeloma Foundation. Dr Quach's research interests include the study of mechanisms of immune modulation in myeloma and the impact of immune modulation on clinical outcome based on correlative studies.

Previous Councils' Review of the Statement of Principles then in force in respect of Myeloma

129. In or about 2003 the Council conducted a review of the contents of Statement of Principles No. 72 of 1999 which was a Statement of Principles previously in force in respect of myeloma. The contended factors considered by the Council in that review were:

(i) parasitic diseases, including malaria;

(ii) antigenic stimulation; and/or

(iii) parasitic disease, including malaria, precipitating antigenic stimulation.

130. The Council published a Declaration dated 7 February 2003, which was published by Gazette Notice 7 of 19 February 2003, pp. 560 - 561.

131. The Minister appointed, and the Convener selected, a newly constituted Council to conduct this review to ensure that there was no apprehension of bias or prejudgement (notwithstanding that the Statements of Principles under review and contended factors were different). The previous Council's decision was not included in the information available to the RMA and forwarded by the RMA to the Council under section 196K of the VEA, and so was not taken into account by the Council in this review.

The Legislation

132. The legislative scheme for the making of Statements of Principles is set out in Parts XIA and XIB of the VEA. Statements of Principles operate as templates. They are determined by the RMA, and set out those criteria (conditions or exposures), known as factors, that must as a minimum exist before it can be said that an injury, disease or death can be connected with service, on either or both of the two statutory tests, the reasonable hypothesis test [70] and the balance of probabilities test. [71] Statements of

---

[70] The reasonable hypothesis test is set out in section 196B(2) of the VEA which provides;

If the Authority is of the view that there is sound medical-scientific evidence that indicates that a particular kind of injury, disease or death can be related to:

(a) operational service rendered by veterans; or

(b) peacekeeping service rendered by members of Peacekeeping Forces; or

(c) hazardous service rendered by members of the Forces; or

Principles are ultimately applied by decision-makers in determining individual claims for benefits under the VEA and the *Military Rehabilitation and Compensation Act 2004* (the MRCA). [72]

133. As noted in [5] the concept of 'sound medical-scientific evidence' as defined in section 5AB(2) of the VEA is fundamental to Statements of Principles. Information about a particular kind of injury, disease or death is taken to be sound medical-scientific evidence if:

a. the information

(i) is consistent with material relating to medical science that has been published in a medical or scientific publication and has been, in the opinion of the Repatriation Medical Authority, subjected to a peer review process; or

(ii) in accordance with generally accepted medical practice, would serve as the basis for the diagnosis and management of a medical condition; and

b. in the case of information about how that injury, disease or death may be caused - meets the applicable criteria for assessing causation currently applied in the field of epidemiology. [73]

(caa) British nuclear test defence service rendered by members of the Forces; or

(ca) warlike or non-warlike service rendered by members;

the Authority must determine a Statement of Principles in respect of that kind of injury, disease or death setting out:

(d) the factors that must as a minimum exist; and

(e) which of those factors must be related to service rendered by a person;

before it can be said that a reasonable hypothesis has been raised connecting an injury, disease or death of that kind with the circumstances of that service.

71 The balance of probabilities test is set out in section 196B(3) of the VEA which provides:

If the Authority is of the view that on the sound medical-scientific evidence available it is more probable than not that a particular kind of injury, disease or death can be related to:

(a) eligible war service (other than operational service) rendered by veterans; or

(b) defence service (other than hazardous service and British nuclear test defence service) rendered by members of the Forces; or

(ba) peacetime service rendered by members;

the Authority must determine a Statement of Principles in respect of that kind of injury, disease or death setting out:

(c) the factors that must exist; and

(d) which of those factors must be related to service rendered by a person;

before it can be said that, on the balance of probabilities, an injury, disease or death of that kind is connected with the circumstances of that service.

72 See sections 120, 120A and 120B of the VEA and sections 335, 338 and 339 of the MRCA.

73 This has been held to mean 'information which epidemiologists would consider appropriate to take into account' see *Repatriation Commission v Vietnam Veterans' Association of Australia NSW Branch Inc* (2000) 48 NSWLR 548 (the New South Wales Court of Appeal decision) per Spigelman CJ at paragraph 117.

134. The functions of the Council are set out in section 196W of the VEA. In this review the Council was asked (under section 196Y of the VEA) by a person eligible to make a claim for a pension, to review the contents of:

- Statement of Principles No. 69 of 2012 concerning myeloma and death from myeloma, being a Statement of Principles determined by the RMA under section 196B(2) of the VEA ('the **reasonable hypothesis** test'); [74] and
- Statement of Principles No. 70 of 2012 concerning myeloma and death from myeloma, being a Statement of Principles determined by the RMA under section 196B(3) of the VEA ('the **balance of probabilities** test').

The information

135. The RMA is obliged under section 196K of the VEA to send to the Council all the information that was available to it (the RMA) at the relevant times. That comprises all the information that was available to the RMA when it determined the original Statements of Principles in respect of myeloma in 1995 and all the information subsequently available at all times when the Statements of Principles have been amended, or revoked and replaced, up to and including the information which was available in October 2012 when the RMA determined the Statements of Principles under review. In other words, within 28 days after being notified that the Council has been asked to conduct a review, the RMA must send to the Council all the information in respect of myeloma which was in the possession of the RMA at the time it (the RMA) made the decision that triggered the Council's review.

136. By email dated 21 March 2013 the RMA, under section 196K of the VEA, sent to the Council the information the RMA advised was available to (before) it at the relevant times, as listed in **Table 2**.

137. By agreement between the RMA and the Council, information the RMA advised was available to (before) it at the relevant times is posted on a secure website (referred to as FILEForce). It is made accessible by the Council to the Applicant, the Commissions and other participants in the review via confidential password.

---

74 But see [7].

Lists at Appendix E of the Information sent to the Council by the RMA under section 196K

138. The list of the preliminary and final pool of information, as advised to the Applicant and the Commissions at the hearing of oral submissions on 30 October 2013 is listed in **Table 1.**

139. The information considered by the Council (being the information that the RMA advised was available to (before) the RMA at the relevant times and which the RMA sent to the Council in accordance with section 196K of the VEA) is listed in **Table 2**.

140. The information upon which the Council understands the Applicant relied, being information which the RMA advised was available to (before) the RMA at the relevant times and which the RMA sent to the Council in accordance with section 196K of the VEA is also listed in **Table 2**.

141. The information to which the Applicant referred, being information which the RMA advised was new information, that is, information which was not available to (not before) the RMA at the relevant times, and so was not considered by the Council in reaching its review decision is listed in **Table 3**.

142. The information upon which the Council understands the Commissions relied, being information which the RMA advised was available to (before) the RMA at the relevant times and which the RMA sent to the Council in accordance with section 196K of the VEA is also listed in **Table 2.**

APPENDIX B: DETERMINATION OF THE STATEMENTS OF PRINCIPLES AND APPLICATION TO THE COUNCIL FOR REVIEW

143. On 22 October 2012 the RMA under subsections 196B(2) and (3) of the VEA determined Statements of Principles Nos. 69 and 70 of 2012 concerning myeloma. The Statements of Principles took effect from 31 October 2012.

144. On 25 October 2012 the Statements of Principles were registered on the Federal Register of Legislative Instruments.

145. On 29 October 2012 in accordance with section 42 of the *Legislative Instruments Act 2003* the Statements of Principles were tabled in the House of Representatives and in the Senate.

146. The Council received an Application for Review of Statements of Principles Nos. 69 and 70 of 2012 on 25 October 2012.

147. Pursuant to section 196ZB of the VEA the Council published in the Gazette a Notice of its Intention to Carry Out a Review of all the information available to the RMA about myeloma and invited eligible persons or organisations so authorised to make submissions to the Council.[75]

[75] Gazette Notice GN 8 of 27 February 2013.

APPENDIX C: THE COUNCIL'S PRELIMINARY AND FINAL DECISIONS ON THE SCOPE OF REVIEW AND THE POOL OF INFORMATION AND THE COUNCIL'S NOTIFICATIONS ON THE SCOPE AND POOL

The Scope of Review

148. As noted in [7], the Council considered that the Applicant had not raised a valid ground of review referable to his contentions concerning the application of Statement of Principles No. 69 of 2012.

149. Taking into account the Applicant's clarification of his contentions, the Council's preliminary decision on the scope of the review, as advised to the Applicant and Commissions on 24 September 2013, was as follows:

> Without limiting the scope of the Council's review of (some or the whole of) the contents of Statements of Principles Nos. 69 and 70 of 2012, the Council presently proposes to have particular regard to whether there was sound medical-scientific evidence upon which the RMA could have relied to amend:
>
> Statement of Principles No. 70 of 2012 in the following way for the clinical:
> - onset; and/or
> - worsening
>
> of myeloma.
>
> That is, the possible inclusion in Statement of Principles No. 70 of 2012 of a factor or factors in the same or similar terms to existing factors 6(c) and 6(d) in Statement of Principles No. 69 of 2012, which respectively provide for:
>
> > inhaling, ingesting or having cutaneous contact with a phenoxy acid herbicide from the specified list, for a cumulative period of at least 1000 hours, within a consecutive period of ten years before the clinical onset of myeloma, where the first exposure occurred at least five years before the clinical onset of myeloma;
> >
> > and/or
> >
> > inhaling, ingesting or having cutaneous contact with a chemical agent contaminated by 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD), for a cumulative period of at least 1000 hours, within a consecutive period of ten years before the clinical onset of myeloma, where the first exposure occurred at least five years before the clinical onset of myeloma.
>
> As defined in paragraph 9 of Statement of Principles No. 69 of 2012:
>
> > "a phenoxy acid herbicide from the specified list" means:
> > (a) 2,4-dichlorophenoxyacetic acid (2,4-D); or
> > (b) 2,4,5-trichlorophenoxyacetic acid (2,4,5-T);
> >
> > and
> >
> > "inhaling, ingesting or having cutaneous contact with a chemical agent contaminated by 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD)" means:
> > (a) decanting or spraying;

(b) cleaning or maintaining equipment used to apply;
(c) being sprayed with;
(d) handling or sawing timber treated with;
(e) being in an environment shrouded in dust from timber treated with; or
(f) using cutting oils contaminated with;
one of the following chemicals:

(i) 2,4,5-trichlorophenoxyacetic acid;
(ii) 2,4,5-trichlorophenoxypropionic acid;
(iii) 2,4,5-trichlorophenol;
(iv) 2-(2,4,5-trichlorophenoxy)-ethyl 2,2-dichloropropionate;
(v) o,o-dimethyl-o-(2,4,5-trichlorophenyl)-phosphorothioate;
(vi) pentachlorophenol;
(vii) 2,3,4,6-tetrachlorophenol;
(viii) 2,4,6-trichlorophenol;
(ix) 1,3,4-trichloro-2-(4-nitrophenoxy)benzene;
(x) 2,4-dichloro-1-(4-nitrophenoxy)benzene; or
(xi) 2,4-dichloro-1-(3-methoxy-4-nitrophenoxy)-benzene.

150. In analysing the information (and particularly the industrial accident studies),[76] it became apparent to the Council that there was sound medical-scientific evidence available to the RMA at the relevant times which potentially could justify an amendment to the Statement/s of Principles by the inclusion of a factor or factors concerning exposure to TCDD in very high doses. Accordingly, the Council considered that the scope of review needed to be expanded. After affording procedural fairness, the Council's final view on the scope of the review was:

(a) as set out in [149]; and

(b) whether there was sound medical-scientific evidence on which the RMA could have relied to amend Statement/s of Principles Nos. 69 and 70 of 2012 by the possible inclusion of a factor or factors for the clinical onset and/or clinical worsening of myeloma concerning:

Any exposure to 2,3,7,8 tetrachlorodibenzo-para-dioxin (TCDD) that provides an initial serum/lipid level of TCDD in the vicinity of 2000 parts per trillion (where the normal level is approximately 5 parts per trillion) before the clinical onset of myeloma.

The Pool of Information

151. The Council considered that the pool of information should comprise information:

- that was available to (before) the RMA at the relevant times;
- which was sent by the RMA to the Council under section 196K of the VEA;

[76] Discussed at [68] - [96].

- which was considered by the Council to be sound medical-scientific evidence as defined in section 5AB(2) of the VEA being information which:

    b. epidemiologists would consider appropriate to take into account; and

    c. in the Council's view 'touches on' (is relevant to) matters within the scope of review.

152. The Council took into account and accepted the submissions on the proposed pool of information made by both the Applicant (see [157]) and the Commissions (see [158]). The Council's final decision on the pool of information was that it should comprise the information listed in **Table 1.**

153. The Council noted the Applicant's references to and submissions concerning information which was not available to (not before) the RMA (see **Table 3**). Information which the RMA advised was not available to (not before) the RMA at the relevant times was not taken into account by the Council for the purposes of the review, as it could only be considered as 'new information' (see [123]).

Notification of Preliminary Decisions on Proposed Scope of Review and Proposed Pool of Information

154. In separate letters to each of the Applicant and the Commissions dated 24 September 2013 the Council in summary:

- advised of the Council's preliminary decisions on the proposed scope of the review and proposed pool of information;

- invited the Applicant and Commissions to make any written comments as to the Council's preliminary decisions by close of business on 11 October 2013; and

- advised that if any written comments were made, any complementary oral comments could be made at a hearing of oral submissions complementing the written submissions.

155. No comments were received on the proposed scope of the review.

156. Comments were received from both the Applicant and the Commissions in relation to the proposed pool of information.

157. The Applicant submitted in his submission dated 3 October 2013 that the pool of information should include[77]:

[77] The Applicant made no specific submissions concerning Pearce, NE at al. 1985, other than his request to the Council to include the article in the Pool of Information.

– Pearce, NE at al 1985, ‘Malignant lymphoma and multiple myeloma linked with agricultural occupations in a New Zealand cancer registry-based study’, *American Journal of Epidemiology*, volume 121, number 2, pages 225 to 237.

158. On 29 October 2013 the Council received an email from the Commissions submitting that the pool of information should include:

– IARC 1987, ‘Evaluation of Carcinogenic Risks to Humans: Overall Evaluations of Carcinogenicity: An updating of IARC Monographs’, World Health, volume 1 to 42, supplement 7; and

– Boffetta, P et al 2011, ‘TCCD and cancer: a critical review of epidemiologic studies’, published in *Critical Reviews in Toxicology*, volume 7, pages 622 to 636.

159. A copy of the Council's revised preliminary list of the proposed pool of information, (which included the articles which the Applicant and the Commissions had respectively submitted should be added to the proposed pool) was provided to the Applicant and the Commissions’ representative at the Council's hearing of oral submissions on 30 October 2013 and is attached at **Table 1**.

160. No comments were received on the Council's revised proposed pool of information.

161. By letters dated 28 March 2014 the Council advised the Applicant and the Commissions of an expanded proposed scope of review and provided an opportunity to comment by 28 April 2014.

162. Having considered the expansion of the proposed scope of review (see [150]), the Council considered whether any changes to the proposed pool of information were required. The Council took into account the comment made by the Commissions (see [166]) and decided not to make any changes, as in the Council’s view the revised proposed pool contained all the information that 'touches on' (is relevant to) matters within the expanded scope of review.

Notification of Preliminary Decisions on Proposed New Factor

163. In its letters of 28 March 2014, the Council also provided the Applicant and the Commissions with an opportunity to comment on the wording of a proposed new factor in respect of TCDD exposure in both of Statements of Principles Nos. 69 and 70 of 2012.

164. The proposed new factors were:

Reasonable Hypothesis Statement of Principles No. 69 of 2012:

> Any exposure to 2,3,7,8 tetrachlorodibenzo-para-dioxin (TCDD) that provides an initial serum/lipid level of TCCD in the vicinity of 2000 parts per trillion (where the normal level is approximately 5 parts per trillion) before the clinical onset of myeloma;

Balance of Probabilities Statement of Principles No. 70 of 2012:

> Any exposure to 2,3,7,8 tetrachlorodibenzo-para-dioxin (TCDD) that provides an initial serum/lipid level of TCCD in the vicinity of 2000 parts per trillion (where the normal level is approximately 5 parts per trillion) before the clinical onset of myeloma.

165. In emails dated 31 March 2014 and 1 April 2014 the Applicant sought clarification of the wording of the proposed factor and asked the Council questions of a technical nature about the level of serum/lipid TCDD as set out in the proposed factor and the half-life of TCDD. The Council has attempted to address these issues in its discussion above.

166. In a letter dated 9 April 2014, the Commissions contended that a report to the DVA by Muller et al 2002 should be included in the pool of information for this review"; and

> "If the Council has formed a view that the minimum level of TCDD exposure necessary to cause myeloma is as specified in the proposed new factor, then the Commissions would see the existing two TCDD factors [factor 6(d) and 6(e)(iii)] in instrument 69 of 2012 as being both unnecessary and potentially inconsistent with that view."

167. The Commissions also proposed alternative wording of the factor.

168. The Council considered the Commissions' comments.

169. Regarding the NRCET [Muller, et al 2002] report, the Council noted that its scope of review did not extend to the 6(e)(iii)) 'potable water' factor. It follows that the Council decided not to add the NRCET report about potable water to the pool of information.

170. In so far as that factor 6(e)(iii and the existing 6(c) and 6(d) factors are concerned the Council was satisfied that the factor it directs the RMA to include in both the Statements of Principles concerning myeloma, did not render those existing factors unnecessary in instrument 69 of 2012, or that the directed factor is inconsistent with those factors. These factors were not in the Council's scope at the reasonable hypothesis level. On the other hand, the Council's examination of blood serum evidence was from a different

subset of data (measure of exposure). The Council recognises that under the VEA the Commissions may take this matter up directly with the RMA.

171. The Council took into account all of the comments it received and considered that it should amend its proposed factor to that set out at [2] above.

APPENDIX D: WRITTEN AND COMPLEMENTARY ORAL SUBMISSIONS

Applicant's submissions

172. The Applicant made:

- a written submission dated 3 October 2013 and
- an oral submission complementing his written submissions on 30 October 2013

both of which were taken into account by the Council.[78]

173. The Applicant contended that:

> …the current available scientific evidence supports the inclusion of factors 6 (c) and 6 (D) from instrument SOP 69/2012 to instrument SOP 70/2012.

174. The Applicant contended that there is a small number of service personnel who did not serve outside Australia but who:

> …were exposed to the herbicides mentioned in the "specified list" in instrument SOP 69/2012.
>
> They were exposed over a much longer period than those who served in Vietnam (due to the nature of their job description - over 1000 hours per year).

175. In support of his contentions the Applicant cited the National Defence and Canadian Armed Forces study on the use of herbicides[79], which stated:

> The IOM [Institute of Medicine] has also found a limited or suggestive evidence of an association for seven other outcomes one of these outcomes is Myeloma.[80]

176. The Applicant also cited a recent case-control study conducted in men by Kachuri et al 2013[81] which he contended concluded that:

---

78 The information upon which the Applicant relied, being information which the RMA advised was available to (before) the RMA at the relevant times, is listed in **Table 2 and 3**.

79 National Defence and Canadian Armed Forces no date, The use of herbicides at GFB Gagetown from 1952 to present, Defence, pp. 1-22 accessed on 2/10/2013 by the Applicant via http://www.forces.gc.ca/en/about-reports-pubs/herbicides-gagtown.page

This article was not available to the RMA at the relevant times, and so could only be considered by the Council as new information.

80 Ibid, at p. 7

81 Kachuri et al, 2013, 'Multiple pesticide exposures and the risk of multiple myeloma in Canadian men', Int J Cancer. 2013 Oct 15;133(8):1846-58

This article was not available to the RMA at the relevant times, and so could only be considered by the Council as new information.

> Multiple Myeloma has been linked to certain agricultural exposures, including pesticides. Significant associations observed for certain chemical classes and individual pesticides suggest that these may be MM risk factors.

177. The Applicant also referred the Council to Table 1 of a Western Australian Government review by Harper 2003[82], and contended:

> …Myeloma is listed as a "possible causal link". The very word possible means there is sound scientific and medical evidence without doubt.

178. In his oral submission the Applicant submitted that:

> Myeloma is one of the rare cancers, and there is now scientific evidence that links exposure to certain herbicides and pesticides to this disease.

179. The Applicant submitted that a soldier, working on Australian bases:

> …used herbicides and chemicals – both mixing and spraying – up to five times per week, six hours per day over a six-year period. These chemicals were stored and mixed in the same area where food was stored and consumed. There was no protective clothing or equipment supplied and no instruction given.
>
> No occupational risk assessment was ever undertaken.

180. The Applicant contended in relation to a possible factor that:

> …a time-exposure factor be applied along with the relevant factors to Instrument 69 of 2012 and to Instrument 70 of 2012.

181. The Applicant further contended that:

> Most studies on Vietnam veterans have shown no increase in myeloma. Agricultural workers show a marked increase in non-Hodgkin's lymphoma and myeloma – both of those have now been classified as B-cell cancers – blood cancers.

182. The Applicant concluded[83] that:

> [The Council]…should take into account the stated causal links between herbicide exposure and Myeloma where the case has been proven for even "possible links" for other than those who have served in Vietnam, but were exposed over longer periods of time.

---

82 Harper, A 2003, Report of expert medical panel to evaluate recommendations of the Kimberley chemical use review, final report, West Australian Government, Perth WA, pp. 1-58.
This article was not available to the RMA at the relevant times, and so could only be considered by the Council as new information.

83 At page 7 of 2013, Written Submission.

> The Applicant also suggests an additional addendum [of the relevant factor 6 (C) and (D) from SoPs No. 69 of 2012 to be included in SoPs No. 70 of 2012] in regard to hours per year (e.g. 1000) to exposure for a consecutive number of years prior to the onset of the disease.

183. References provided by the Applicant to material that was not available to the RMA at the relevant times are listed at **Table 3**.

Commissions' submissions

184. The Commissions made a written submission dated 25 June 2013, and a Medical Officer with the Department of Veterans' Affairs, representing the Commissions, made an oral submission complementing the Commissions' written submission at the Council's meeting on 30 October 2013.[84]

185. The Commissions identified papers describing exposures for the following groups:

- US and Australian Vietnam veterans;
- Chemical production workers;
- Agricultural workers;
- Other pesticide applicators;
- Forestry workers; and
- Environmentally exposed subjects.

Vietnam veterans

186. In terms of exposure experienced by Australian forces in Vietnam, the Commissions stated that they:

> ….did not directly use 2,4,5-T (with two small scale exceptions). Australian personnel in Vietnam utilised and were exposed to non-phenoxy herbicides, particularly bromacil, diquat, borate and chlorate. Limited use was also made of Tordon 50-D (80% picloram, 20% 2,4-D) along with paraquat and creosote. Potential exposure of Australian personnel in Vietnam to 2,4,5-T and to TCDD came from being in areas that had been sprayed by US forces or via other pathways such as contaminated food.

187. The Commissions identified three original reports[85] on the Vietnam veterans' cohort that were available to the RMA. About these it concluded that:

---

84 The information upon which the Commissions relied, being information which the RMA advised was available to (before) the RMA at the relevant times, is listed in Appendix E - **Table 2**.

85 Ketchum NS, Michalek JE, Burton JE (1999). Serum dioxin and cancer in veterans of operation ranch hand. Am J Epidemiol, 149(7): 630-639. RMA ID 16739

Cypel Y, Kang AH (2010). Mortality patterns of army chemical corps veterans who were occupationally exposed to herbicides in Vietnam. Ann Epidemiol, 20: 339-46. RMA ID 63757

Dalager NA, Kang HK (1997). Mortality among army chemical corps Vietnam Veterans. Am J Indust Med, 31: 719-26. RMA ID

> …none provided any results for myeloma risk. … One of these reports (Ketchum et al 1999[86]) does provide information on measured and extrapolated serum TCDD levels in Ranch Hand and other US Air Force veterans.

188. The Commissions cited a 2011 review of the medical scientific information on dioxins (agent orange) and Vietnam veterans by the Institute of Medicine[87] and concluded that:

> Not one of the Vietnam veterans studies cited in VAO 2010 found a statistically significant elevated risk of multiple myeloma in veterans.

189. The Commissions submitted that evidence from Vietnam veteran studies were not helpful when looking at TCDD.

> …general veterans, if they were exposed, they were exposed to quite low levels. We have got no meaningful exposure assessment in that group, and no evidence of increased Myeloma risk in that population.
>
> …in the subset of veterans who were exposed, the Ranch Hand and the Chemical Corps people, some of whom have had TCDD measurements, we don't have any useful data on Myeloma.

Chemical Production Workers

190. The Commissions submitted that the best available evidence for phenoxy herbicide and TCDD exposure come from studies of:

> …workers involved in the production of either phenoxy herbicides (including 2,4,5-T, contaminated by TCDD) or chlorophenols (which can be contaminated by TCDD or other higher chlorinated dioxins).

191. The Commissions contended that while the small case numbers described in these studies for myeloma limit the usefulness of the data, the advantages of these studies include:

> …higher exposure levels, better quantification of exposure (with serum levels of TCDD in some cases) and less potential confounding by other exposures, when compared to studies in other populations.

192. The Commissions cited Steenland et al 1999,[88] which they contended provided six year follow-up data on the IARC cohort[89]. The Commissions

---

86 Ketchum NS, Michalek JE, Burton JE (1999). Serum dioxin and cancer in veterans of operation ranch hand. Am J Epidemiol, 149(7): 630-639. RMA ID 16739

87 Institute of Medicine 2011, *Veterans and Agent Orange (VAO): Update 2010*, National Academy Press, Washington DC, p 489-97.

88 Steenland, K et al 1999, 'Cancer, heart disease, and diabetes in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin', Journal of the National Cancer Institute, vol. 91, no. 9, pp. 779-86. RMA ID 25814

noted that the Steenland et al 1999 study used a job-exposure matrix to assess TCDD exposure levels, and reported for multiple myeloma that :

> …there were 10 deaths in the cohort and the SMR was 2.07 (95% CI, 0.99 to 3.80).
>
> …There was no excess of haematopoietic cancers in the most highly exposed subjects (3 cases, 4.8 expected).

193. The Commissions submitted that other studies of cancer risk in chemical production workers exposed to phenoxy herbicides / TCDD all had very small numbers of exposed myeloma cases.

- Despite this, there were three studies cited in VAO 2010 that reported statistically significant associations (based on either two or three cases). These were Lynge 1993,[90] Becher et al 1996[91] and 't Mannetje et al 2005[92] .

194. Concerning 't Mannetje et al 2005, the Commissions submitted that:

> …the phenoxy herbicide exposure was predominantly to 2,4,5-T. Exposure information was limited to years worked and in which department of the production plant an individual worked. There were three myeloma cases in the production workers vs. 0.5 expected, giving an SMR of 5.51 (95% CI, 1.14 to 16.1). Two of the cases worked in packing and transport and the location for the other wasn't specified. There were no myeloma cases in the sprayers, vs. 0.7 expected.

195. The Commissions contended that 't Mannetje et al 2005:

> …found an increased risk in the production workers but not in the sprayers.
>
> In the production workers, that was based on three cases. They didn't have much information on exposure levels in the production workers in particular. They did some testing in the sprayers, and they found them to have an average TCDD in 1988, well

---

89 Kogevinas M, Becher H, Benn T et al (1997). Cancer mortality in workers exposed to phenoxy herbicides, chlorophenols, and dioxins. American Journal of Epidemiology, 145(12): 1061-75.
This article was not available to the RMA at the relevant times, and so could only be considered by the Council as new information. The Commissions cited this article in its written submission stating it was not relied upon by the Commissions.

90 Lynge, E 1998, 'Cancer incidence in Danish phenoxy herbicide workers, 1947-1993', Environmental Health Perspectives, vol. 106, suppl. 2, pp. 683-688. RMA ID 17285

91 Becher H, Flesch-Janys D, Kauppinen T et al 1996, 'Cancer mortality in German male workers exposed to phenoxy herbicides and dioxins. Cancer Causes Control, vol. 7, pp. 312-21.
This article was not available to the RMA at the relevant times, and so could only be considered by the Council as new information. The Commissions cited this article in its written submission stating it was not relied upon by the Commissions.

92 t Mannetje, A et al 2005, 'Mortality in New Zealand workers exposed to phenoxy herbicides and dioxins', Occupational and Environmental Medicine, vol. 63, no. 34-40. RMA ID 34856

after their exposure, of around 53.3 ppt[93] which they back-extrapolated to a level of 300 ppt during their exposure.

196. The Commissions commented that the 't Mannetje et al 2005 study was looking at:

> …a whole bunch of associations - many different cancers associations - and it's possible in that setting that they're finding for Myeloma of a statistically significant association…maybe … about chance.

197. The Commissions cited a later study by McBride et al 2009[94] which reported on an expanded cohort from the same production plant as 't Mannetje et al 2005.

> This study used similar methods but more comprehensive exposure assessment, including serum dioxin testing in a proportion of subjects. This study identified only two myeloma cases and reported an SMR of 2.2 (95% CI, 0.2 to 8.1).
>
> … did some measuring of TCDD in the production workers, … quite a long time after their exposure.
>
> They looked at exposure months, and they did not back-extrapolate.
>
> …from this larger cohort they could find… only two cases of Myeloma … versus three for 't Mannetje.
>
> …going from three cases to two in a bigger cohort reduced the magnitude of the risk estimate, and reduced it to below statistical significance.

198. The Commissions cited a study by Lynge 1998[95] about which the Commissions submitted:

> No incident cases of multiple myeloma were observed in men potentially exposed to phenoxy herbicides vs. 1.89 expected. In women there were two observed cases vs. 0.44 expected, giving an SIR of 4.55 (95% CI, 0.6 to 16.4).

199. The Commissions cited a study be Burns et al 2001[96] and submitted:

---

93 ppt – 'parts per trillion'

94 McBride, DI et al 2009, 'Mortality in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin at a trichlorophenol plant in New Zealand', Journal of Occupational & Environmental Medicine, vol. 51, no. 9, pp. 1049-56. RMA ID 56055

95 Lynge, E 1998, 'Cancer incidence in Danish phenoxy herbicide workers, 1947-1993', Environmental Health Perspectives, vol. 106, suppl. 2, pp. 683-688. RMA ID 17285

96 Burns, CJ et al 2001, 'Mortality in chemical workers potentially exposed to 2,4-dichlorophenoxyacetic acid (2,4-D) 1945-94: an update', Occupational and Environmental Medicine, vol. 58, pp. 24-30. RMA ID 26080

> A job exposure matrix was used to calculate cumulative 2,4-D exposure. There was one death from myeloma in the cohort vs. 1.2 expected, giving an SMR of 0.80 (95% CI, 0.02 to 4.46). No association was found between exposure level and cancer risk for any of the cancer types evaluated in the study.

200. The Commissions cited a cohort mortality study by Hooiveld et al 1998[97] about which the Commissions submitted:

> In this relatively small cohort (549 male workers) there were no deaths from multiple myeloma. However, the study did involve serum dioxin testing and provides information on measured and extrapolated TCDD levels in a subset of the subjects.

201. In conclusion, the Commissions submitted that the study of exposed workers by Steenland et al 1999[98] provided the strongest evidence in favour of TCDD as a risk factor for Myeloma.

> We have some details on their serum TCDD levels, and … we can compare that to levels in other groups. So in this cohort their mean serum TCDD was recorded to be around 2000 ppt based on a limited sample of the cohort. That compares to a general population figure - that varies over time - but it's somewhere less than 10; in Australia it's probably less than five. But in the US a contemporary figure at the time … these workers were being exposed was probably in the 10 to 20 range.

202. The Commissions further submitted that:

> TCDD exposure peaked in the general population in the late sixties, early seventies and has declined fairly substantially since then. And there's no actual testing of the general populations from that date, so you would have to try and recreate the numbers (2000 ppt in these workers versus a figure two orders of magnitude less than the general population).
>
> And we have also got some numbers from elsewhere for the Ranch Hand subjects; the people who were part of the US spraying program in Vietnam. … there has been some testing in them. … there's evidence of a median figure in that population of the heavily exposed people in that population of around 200 ppt.

Agricultural workers

203. The Commissions cited a number of studies in relation to risk of multiple myeloma in farmers, other agricultural workers, pesticide sprayers, forestry workers and other subjects with occupational exposure to pesticides, submitting that very little of the evidence from these studies, provides

---

97 Burns, CJ et al 2001, 'Mortality in chemical workers potentially exposed to 2,4-dichlorophenoxyacetic acid (2,4-D) 1945-94: an update', Occupational and Environmental Medicine, vol. 58, pp. 24-30. RMA ID 26080

98 Steenland, K et al 1999, 'Cancer, heart disease, and diabetes in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin', Journal of the National Cancer Institute, vol. 91, no. 9, pp. 779-86. RMA ID 25814

information on risk of myeloma from exposure specifically to 2,4-D, 2,4,5-T or TCDD.

> Workers in such occupations have exposures to a large number of potential carcinogens including a wide array of pesticides. Studies of this type are essentially unhelpful in elucidating the myeloma risk from specific agents, except where data specific to those agents are provided.

204. The Commissions noted that:

> …no data specifically on TCDD exposure are available from these studies.
>
> Those studies that report some results for myeloma risk for exposure to 2,4-D, 2,4,5-T, or less specifically, phenoxy herbicides, are briefly summarised below.

205. The Commissions cited Brown et al 1993,[99] and submitted that:

> …for 2,4-D there were 35 exposed myeloma cases and the odds ratio relative to non-farmer controls was 1.0 (95% CI, 0.6 to 1.6) For 2,4,5-T there were seven cases and the odds ratio was 0.9 (95% CI, 0.4 to 2.1).

206. The Commissions cited a population-based case-control study by Pahwa et al 2006[100] and submitted:

> The data provided included results for risk of multiple myeloma from exposure to any phenoxy herbicide, the same study[101] (which was not available to the RMA for this investigation), states that gorse spraying in particular almost always used 2,4,5-T, but is silent on whether 2,4,5-T was used for spraying the other plant types in the above list. The cited results from this study in VAO 2010 may thus involve a misclassification of exposure.

207. The Commissions cited Eriksson and Karlsson 1992[102], and submitted:

> Exposure to phenoxyacetic acid herbicides had occurred in 20 cases vs. nine controls. For these results the authors reported the relative risk (2.22) rather than the

---

99 Brown LM, et al1993, 'Pesticide exposure and multiple myeloma in Iowa Men', Cancer Causes Control, vol. 4, no. 2, pp. 153-6. RMA ID 65060

100 Pahwa, P et al 2006, 'Hodgkin lymphoma, multiple myeloma, soft tissue sarcomas, insect repellents, and phenoxy herbicides', Journal of Occupational & Environmental Medicine, vol. 48, pp. 264-74. RMA ID 62390

101 Pearce NE, Smith AH, Howard AH *et al* (1986). Non-Hodgkin's lymphoma and exposure to phenoxy herbicides, chlorophenols, fencing work, and meat works employment: a case-control study. *Br J Industrial Med,* 43: 75-83.

This article was not available to the RMA at the relevant times, and so could only be considered by the Council as new information. The Commissions cited this article in its written submission stating it was not relied upon by the Commissions.

102 Eriksson, M Karlsson, M 1992, 'Occupational and other environmental factors and multiple myeloma: A population based case-control study', British Journal of Industrial Medicine, vol. 49, pp. 95-103. RMA ID 63758

odds ratio and the 90% confidence interval (1.15 to 4.46) rather than the 95% interval. These results were on univariate analysis. From the provided data the 95% confidence interval has been calculated, which is 0.99 to 4.98. On multivariate analysis the risk reduced to 1.92 (90% CI, 0.84 to 4.36).

Some dose response data were also provided based on days of work with phenoxyacetic acid herbicides. For three categories of exposure (≤ 5 days, 6 to 20 days and ≥ 21 days) the relative risks were, respectively 3.0, 2.0 and 2.0.

208. The Commissions cited Thorn et al 2000[103], and submitted:

> This study had some better exposure assessment derived from work records. There were no incident multiple myeloma cases, vs. 0.43 expected (collectively) in exposed subjects.

209. About Orsi et al 2009[104], the Commissions submitted:

> Results for phenoxy herbicide exposure and risk of multiple myeloma were provided, with an OR of 2.6 (95% CI, 0.9 to 7.0), based on seven exposed cases. No details on the types of phenoxy herbicides were provided.

Industrial Accident - Seveso

210. The Commissions submitted that the main body of evidence concerning environmental exposure to TCDD comes from studies of a population affected by a 1976 industrial accident in Seveso, Italy.

211. The Commissions submitted that the Seveso cohort provides the best evidence for TCDD and Myeloma.

- Consonni et al 2008[105] for three categories of exposure (≤ 5 days, 6 to 20 days and ≥ 21 days), that the relative risks were, respectively, 3.0, 2.0 and 2.0 after 25 years of follow-up.

- Pesatori et al 2009[106], and the 20 year mortality follow up by Bertazzi et al 2001[107], while providing quite small case numbers

---

103 Thorn A, Gustavsson P, Sadigh J, Westerlund-Hannestrand B, et al, 2000, 'Mortality and cancer incidence among Swedish lumberjacks exposed to phenoxy herbicides', Occup Environ Med, 57(10): 718-20 RMA ID 26118

104 Orsi, L et al 2009, 'Occupational exposure to pesticides and lymphoid neoplasms among men: results of a French case-control study', Occupational and Environmental Medicine, vol. 66, no. 5, pp. 291-8.

105 Consonni, D et al 2008, 'Mortality in a population exposed to dioxin after the Seveso, Italy accident in 1976: 25 years of follow-up', American Journal of Epidemiology, vol. 167, no. 7, pp. 847-58.

106 Pesatori, AC et al 2009, 'Cancer incidence in the population exposed to dioxin after the "Seveso accident": twenty years of follow-up', Environmental Health, vol. 8, pp. 39. RMA ID 63465

and not providing formal dose response information, or testing for trend, do provide:

> …the suggestion of a response, and a latency period of five to 15 years in the female data, in particular…
>
> So that's some reinforcement for the case for TCDD.

- Pesatori, AC et al 2009 and Consonni et al 2008 for myeloma in the following table.

Table 3.[108] Myeloma incidence and mortality in the Seveso accident population.

	Myeloma incidence 1977 - 1996			**Myeloma mortality 1976 - 2001**		
	Obs	RR	95% CI	Obs	RR	95% CI
Zone A	1	2.88	0.40 – 20.70	2	4.34	1.07 – 17.52
Zone B	6	2.77	1.2 – 6.32	5	1.68	0.69 – 4.10
Zone R	18	1.15	0.70 – 1.91	24	1.10	0.71 – 1.69

Obs = observed
RR = risk relative to unexposed population from surrounding area

212. In relation to 2,4-D exposure the Commissions submitted:

> [The Commissions]…would suggest it's (2,4-D) struggling to warrant inclusion in the reasonable hypothesis SOP as a factor, and that it's well short of meeting the balance of probabilities standard of proof. So in the Commission's view, there's no basis for having a factor for 2,4-D as a risk factor for Myeloma.

213. However the Commissions submitted that because of the contamination of 2,4,5-T by TCDD:

> …it would …, be redundant to also have a factor for 2,4,5,-T because …. one of the main ways of having that exposure [to TCDD] is through exposure to 2,4,5-T.

214. The Commissions submitted that the medical scientific evidence for TCDD warranted the closest attention in determining whether there should be a factor in the Statement of Principles.

215. About the evidence from the Seveso cohort, the Commissions submitted that the most highly exposed group received a median exposure of 447 ppt.

---

107 Bertazzi, PA et al 2001, 'Health effects of dioxin exposure: a 20-year mortality study', American Journal of Epidemiology, vol. 153, no. 11, pp. 1031-1044. RMA ID 25817

108 Commissions' Written Submission, Table 3, p 14

> So the production workers, of the people who have been tested and for whom we have data, are certainly the most heavily exposed.
>
> …we are limited in this study by the small number of cases, ten Myeloma deaths in total, which was a two-fold risk versus the general US population and it was just short of statistical significance.
>
> …they weren't able to give us any dose response information for Myeloma, but there was some other evidence for other cancers where they found - they did find an increased risk but it was confined to the most highly exposed workers.

216. The Commissions stated:

> So for TCDD it's in the [current] reasonable hypothesis SOP that seems justified. We have got some, at least, suggestive evidence but overall the results are inconclusive. We don't have dose response information in a convincing way, which you would like to have given the uncertainty about the exposure in some of these people.

217. In conclusion the Commissions stated of the available evidence, there was possible confounding in the results by other exposures and the small case numbers.

> …as the Commission sees it, [the evidence] falls short of meeting the balance of probabilities standard of proof.

218. The Commissions added however, that if the Council were to conclude otherwise:

> …then… you're probably looking at a level of exposure that's not really plausible for anyone in the military setting.

219. In conclusion, the Commissions submitted that:

> The quality of the available evidence concerning myeloma risk from exposure to 2,4-D and 2,4,5-T and TCDD is limited in particular by the difficulty of exposure assessment, the high possibility of confounding (by chemical and other exposures) and the generally small numbers of myeloma cases in the available studies.

And noted that:

> The RMA has concluded that the available evidence indicates, but does not establish on the balance of probabilities, that myeloma can be causally related to exposure to both 2,4-D and 2,4,5-T.
>
> The RMA has reached the same conclusions regarding exposure to TCDD.

220. Further, the Commissions concluded that the evidence "for both TCDD alone and for 2,4,5-T and TCDD together, is limited", and that they "could not identify any direct evidence that myeloma could be causally related to 2,4-D exposure".

> … the evidence that was available to the RMA does not warrant the inclusion of additional SOP factors in Instrument 70 of 2012, concerning 2,4-D and 2,4,5-T, or TCDD exposure.

APPENDIX E: INFORMATION BEFORE THE COUNCIL

TABLE 1 – Pool of Information

RMA ID	Title
58803	Bakke, B et al. 2009, 'Exposure to atrazine and selected non-persistent pesticides among corn farmers during a growing season', *Journal of Exposure Science and Environmental Epidemiology*, vol. 19, pp. 544-554.
3053	Bertazzi, PA et al. 1993, 'Cancer incidence in a population accidentally exposed to 2,3,7,8-Tetrachlorodibenzo-para-dioxin', *Epidemiology*, vol. 4, no. 5, pp. 398-406.
12982	Bertazzi, PA et al. 1997, 'Dioxin exposure and cancer risk: a 15-year mortality study after the Seveso Accident', *Epidemiology*, vol. 8, no. 6, pp. 646-652.
14329	Bertazzi, PA et al. 1998, 'The Seveso studies on early and long-term effects of dioxin exposure: a review', *Environmental Health Perspectives*, vol. 106, suppl. 2, pp. 625-633.
22514	Bertazzi, PA et al. 1999, 'Dioxin exposure and human leukemias and lymphomas. Lessons from the Seveso accident and studies on industrial workers', *Leukemia*, vol. 13, suppl. 1, pp. S72-S74.
25817	Bertazzi, PA et al. 2001, 'Health effects of dioxin exposure: a 20-year mortality study', *American Journal of Epidemiology*, vol. 153, no. 11, pp. 1031-1044.
26080	Burns, CJ et al. 2001, 'Mortality in chemical workers potentially exposed to 2,4-dichlorophenoxyacetic acid (2,4-D) 1945-94: an update', *Occupational and Environmental Medicine*, vol. 58, pp. 24-30.
50730	Clapp, RW et al. 2008, 'Environmental and occupational causes of cancer: new evidence 2005-2007', *Reviews on Environmental Health*, vol. 23, no. 1, pp. 1-37.
55675	Consonni, D et al. 2008, 'Mortality in a population exposed to dioxin after the Seveso, Italy accident in 1976: 25 years of follow-up', *American Journal of Epidemiology*, vol. 167, no. 7, pp. 847-858.
63757	Cypel, Y Kang, AH 2010, 'Mortality patterns of army chemical corps veterans who were occupationally exposed to herbicides in Vietnam', *Annals of Epidemiology*, vol. 20, pp. 339-346.

4548 63758 Eriksson, M Karlsson, M 1992, 'Occupational and other environmental factors and multiple myeloma: A population based case-control study', *British Journal of Industrial Medicine*, vol. 49, pp. 95-103.

26075 Hooiveld, M et al. 1998, 'Second follow-up of a Dutch cohort occupationally exposed to phenoxy herbicides, chlorophenols, and contaminants', *American Journal of Epidemiology*, vol. 147, no. 9, pp. 891-901.

63459 IARC Monographs 2012, Agents classified by the International Agency for Research on Cancer, vol. 1-102. retrieved 27 February 2012, from http://monographs.iarc.fr/ENG/Classification/ClassificationsAlphaOrder.pdf

67476 Institute of Medicine 2011, *Veterans and Agent Orange. Update 2010*, chap, 7, pp. 405-12, National Academies Press, Washington, DC.

16739 Ketchum, NS et al. 1999, 'Serum dioxin and cancer in veterans of operation ranch hand', *American Journal of Epidemiology*, vol. 149, no. 7, pp. 630-639.

58798 58816 Landgren, O et al. 2009, 'Pesticide exposure and risk of monoclonal gammopathy of undetermined significance in the Agricultural Health Study', *Blood*, vol. 113, no. 25, pp. 6386-6391.

17285 Lynge, E 1998, 'Cancer incidence in Danish phenoxy herbicide workers, 1947-1993', *Environmental Health Perspectives*, vol. 106, suppl. 2, pp. 683-688.

56055 McBride, DI et al. 2009, 'Mortality in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin at a trichlorophenol plant in New Zealand', *Journal of Occupational & Environmental Medicine*, vol. 51, no. 9, pp. 1049-1056.

38743 Mills, PK et al. 2005, 'Lymphohematopoietic cancers in the United Farm Workers of America 1988-2001', *Cancer Causes & Control*, vol. 16, pp. 823-830.

4574 65060 Morris-Brown, LM et al. 1993, 'Pesticide exposures and multiple myeloma in Iowa men', *Cancer Causes & Control*, vol. 4, pp. 153-156.

4552 Morrison, HI et al. 1992, 'Review - Herbicides and Cancer', *Journal of the National Cancer Institute*, vol. 84, no. 24, pp. 1866-1874.

62271 Orsi, L et al. 2009, 'Occupational exposure to pesticides and lymphoid neoplasms among men: results of a French case-control study', *Occupational and Environmental Medicine*, vol. 66, no. 5, pp. 291-298.

62390 Pahwa, P et al. 2006, 'Hodgkin lymphoma, multiple myeloma, soft tissue sarcomas, insect repellents, and phenoxyherbicides', *Journal of Occupational & Environmental Medicine*, vol. 48, pp. 264-274.

63194 Pahwa, P et al. 2012, 'Multiple myeloma and exposure to pesticides: A Canadian case-control study', *Journal of Agromedicine*, vol. 17, pp. 40-50.

16002 Pearce, NE et al. 1986, 'Case-control study of multiple myeloma and farming', *British Journal of Cancer*, vol. 54, pp. 493-500.

63465 Pesatori, AC et al. 2009, 'Cancer incidence in the population exposed to dioxin after the "Seveso accident": twenty years of follow-up', *Environmental Health*, vol. 8, p. 39.

25814 Steenland, K et al. 1999, 'Cancer, heart disease, and diabetes in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin', *Journal of the National Cancer Institute*, vol. 91, no. 9, pp. 779-786.

15118 Svensson, BG et al. 1995, 'Mortality and cancer incidence among Swedish fishermen with a high dietary intake of persistent organochlorine compounds', *Scandinavian Journal of Work, Environmental and Health*, vol. 21, no. 2, pp. 106-115.

34856 't Mannetje, A et al. 2005, 'Mortality in New Zealand workers exposed to phenoxy herbicides and dioxins', *Occupational and Environmental Medicine*, vol. 63, no. 34-40.

26118 Thorn, A et al. 2000, 'Mortality and cancer incidence among Swedish lumberjacks exposed to phenoxy herbicides', *Occupational and Environmental Medicine*, vol. 57, no. 10, pp. 718-720.

TABLE 2 – The Available Information

RMA ID	Title	Relied upon by
62246	Abbott, KC Agodoa, LY 2001, 'Multiple myeloma and light chain-associated nephropathy at end-stage renal disease in the United States: patient characteristics and survival', *Clinical Nephrology*, vol. 56, no. 2, pp. 207-210.	
26847	Abdulla, AJ et al.. 2000, 'Multiple myeloma and Kaposi's sarcoma: what is the association?', *British Journal of Dermatology*, vol. 142, no. 4, pp. 818-820.	
16744	Acquavella, J et al. 1998, 'Cancer among farmers: a meta-analysis', *Annals of Epidemiology*, vol. 8, pp. 64-74.	
15364	Adami, J et al. 1998, 'Smoking and the risk of leukemia, lymphoma, and the multiple myeloma, Sweden', *Cancer Causes & Control*, vol. 9, no.1, pp. 49-56.	
63760	Agricultural Health Study Publications 2012, accessed at http://aghealth.nci.nih.gov/publications.html	
17593	Agu, VU et al. 1980, 'Geographic patterns of multiple myeloma: racial and industrial correlates, State of Texas, 1969-71', *Journal of the National Cancer Institute*, vol. 65, no. 4, pp. 735-738.	
25835	Ahlbom, A Feychting, M 1999, 'A Bayesian approach to hazard identification. The case of electromagnetic fields and cancer', *Annals of the New York Academy of Sciences*, vol. 895, pp. 27-33.	
28219	Ahlbom, A, et al. 2001, 'Review of the epidemiological literature on EMF and health', *Environmental Health Perspectives*, vol. 109, suppl. 6, pp. 911-933.	
4774	Ahlborg, UG et al. 1995, 'Organochlorine compounds in relation to breast cancer, endometrial cancer, and endometriosis: an assessment of the biological and epidemiological evidence', *Critical Reviews in Toxicology*, vol. 25, no. 6, pp. 463-531.	

4596 Aksoy, M 1989, 'Hematotoxicity and carcinogenicity of benzene', *Environmental Health Perspectives*, vol. 82, pp. 193-197.

14606 Aksoy, M et al. 1984, 'Clinical observations showing the role of some factors in the etiology of multiple myeloma. A study in 7 patients', *Acta Haematologica Polonica Polonicaogica*, vol. 71, no. 2, pp.116-120.

63460 Alavanja, MC et al. 2004, 'Pesticides and lung cancer risk in the Agricultural Health Study Cohort', *American Journal of Epidemiology*, vol. 160, no. 9, pp. 876-885.

29275 Alavanja, MCR et al. 2002, 'Use of agricultural pesticides and prostate cancer risk in the agricultural health study cohort', *American Journal of Epidemiology*, vol. 157, no. 9, pp.800-814.

45744 Alavanja, MCR et al. 2005, 'Cancer incidence in the Agricultural Health Study', *Scandinavian Journal of Work, Environment & Health*, vol. 31, suppl. 1, pp. 39-45.

15361 Alberts, SR Lanier, AP 1997, 'Correspondence re: GG Schwartz, Multiple myeloma: clusters, clues, and dioxins. Epidemiology, Biomarkers & Prevention. Prev. 6: 49-56, 1997', *Cancer Epidemiology, Biomarkers & Prevention*, vol. 6, pp. 857-858.

4650 Alderson, M 1986, '*Benzene. Occupational Cancer*, ch. 2, no. 8, pp. 43-46, Butterworth, London.

60974 Alexander , DD et al. 2007, 'Multiple myeloma: a review of the epidemiologic literature', *International Journal of Cancer*, vol. 120, pp. 40-61.

45743 Alexander, BH et al. 2005, 'Sessions on the epidemiology of agricultural exposure and cancer', *Scandinavian Journal of Work, Environment & Health*, vol. 31, pp. 5-7.

60963 Alexander, DD et al. 2006, 'A meta-analysis of occupational trichloroethylene exposure and multiple myeloma or leukaemia', *Occupational Medicine*, vol. 56, pp. 485-493.

26298 Altekruse, SF et al. 1999, 'Henley SJ, Thun MJ. Deaths from hematopoietic and other cancers in relation to permanent hair dye use in a large prospective study, United States', *Cancer Causes & Control*, vol. 10, no. 6, pp. 617-625.

60971 Altieri, A et al. 2006, 'Familial risks and temporal incidence trends of multiple myeloma', *European Journal of Cancer*, vol. 42, pp. 1661-1670.

25400 Andersen, A et al. 1999, 'Work-related cancer in the Nordic countries', *Scandinavian Journal of Work Environmental & Health*, vol. 25, suppl. 2, pp. 1-116.

27533 Anderson, KC 2001, 'Advances in disease biology: therapeutic implications', *Seminars in Haematology*, vol. 38, no. 2, suppl. 3, pp. 6-10.

26831 Anderson, KC 2003, 'Multiple myeloma: how far have we come?', *Mayo Clinic Proceedings,* vol. 78, no. 1, pp.15-17.

22515 Anderson, KC Lust, JA 1999, 'Role of cytokines in multiple myeloma', *Seminars in Haematology*, vol. 36, no. 1, suppl.. 3, pp. 14-20.

53798 Anderson, LA et al. 2009, 'Population-based study of autoimmune conditions and the risk of specific lymphoid malignancies', *International Journal of Cancer*, vol. 125, pp. 398-405.

62335 Andersson, M et al. 1995, 'Mortality and cancer incidence after cerebral arteriography with or without thorotrast'. *Radiation Research*, vol. 142, pp. 305-320.

11081 Anonymous, 1997, 'Revisiting Three Mile Island', *Environmental Health Perspectives*, vol. 105, no. 1, pp. 22-23.

10362 12998 Anttila, A et al. 1995, 'Cancer Incidence among Finnish workers exposed to halogenated hydrocarbons', *Journal of Occupational & Environmental Medicine*, vol. 37, no. 7, pp. 797-806.

15741 Anttila, A et al. 1998, 'Cancer incidence among Finnish workers exposed to aromatic hydrocarbons', *International Archives of Occupational and Environmental Health*, vol. 71, pp. 187-193.

62171 Anzenberg, V et al. 2010, [COMMENT] 'The U.S. Nuclear Regulatory Commission Radiation Exposure Information Reporting System (REIRS)', *Radiation Research*, vol. 173, pp. 254-255, comment on ID: 62170.

63340 Apostolakis, S et al 2009, [COMMENT] 'Vascular imaging as a cardiovascular risk stratification tool in systemic lupus erythematosus', *The Journal of Rheumatology*, vol. 36, no. 10, pp. 2141-2143, comment on ID: 62890.

26834 Arseneau, KO et al 2001, 'The incidence of lymphoid and myeloid malignancies among hospitalized Crohn's disease patients', *Inflammatory Bowel Disease*, vol. 7, no. 2, pp.106-112.

15319 Ashmore, JP et al. 1998, 'First analysis of mortality and occupational radiation exposure based on the National dose Registry of Canada', *American Journal of Epidemiology*, vol. 148, no. 6, pp. 564-574.

17386 Athanasou, NA 1996, 'Cellular biology of bone-reabsorbing cells', *The Journal of Bone & Joint Surgery*, vol. 78A, no. 7, pp. 1096-1113.

37805 Australian Institute of Health and Welfare 1998, *Morbidity of Vietnam veterans: A study of the health of Australia's Vietnam veteran community: Male Vietnam Veterans Survey and Community Comparison Outcomes*, vol. 1, AIHW Canberra.

28266 Australian Institute of Petroleum, 2001*, Lympho-haematopoietic cancer and exposure to benzene in the Australian petroleum industry*, Technical report and appendices, accessed 21 May 2003, from http://www.aip.com.au/pef/case_study.pdf

26890 Avet-Loiseau, H et al. 2002, 'Oncogenesis of multiple myeloma: 14q32 and 13q chromosomal abnormalities are not randomly distributed, but correlate with natural history, immunological features, and clinical presentation', *Blood* vol. 99, no. 6, pp. 2185-2191.

41161 Axelson, O 2004. [COMMENT] 'Is the evidence for its carcinogenicity conclusive?', *Occupational and Environmental Medicine*, vol. 61, no. 1, p.1.

55669 Baan, R et al. 2007, 'Carcinogenicity of alcoholic beverages. *Lancet Oncologyogy*, vol., 8, no. 4, pp. 292-293.

58010 Baan, R et al. 2009, 'A review of human carcinogens-Part F: Chemical agents and related occupations', *Lancet Oncologyogy*, vol. 10, pp. 1143-1144. **Applicant**

15408 Baba, H et al. 1998, 'Solitary plasmacytoma of the spine associated with neurological complications', *Spinal Cord*, vol. 36, no. 7, pp. 470-475.

58273 Bachand, A et al. 2010, 'Meta-analyses of occupational exposure as a painter and lung and bladder cancer morbidity and mortality 1950-2008', *Critical Reviews in Toxicology*, vol. 40, no. 2, pp. 101-125.

58803 Bakke, B et al. 2009, 'Exposure to atrazine and selected non-persistent pesticides among corn farmers during a growing season', *Journal of Exposure Science and Environmental Epidemiology*, vol. 19, pp. 544-554.

15430 Baris, D et al. 1996, 'A mortality study of electrical utility workers in Quebec', *Occupational Environmental Medicine*, vol. 53, pp. 25-31.

62337 Baris, D et al. 2001, 'Cohort mortality study of Philadelphia firefighters', *American Journal of Industrial Medicine*, vol. 39, pp. 463-476.

63168 Baris, D et al. 2004, 'Occupation pesticide exposure and risk of multiple myeloma', *Scandinavian Journal of Work, Environmental & Health*, vol. 30, no. 3, pp. 215-222.

4607 Barlogie, B Gale, RB 1992, 'Multiple myeloma and chronic lymphocytic leukemia: Parallels and contrasts', *American Journal of Medicine*, vol. 93, pp. 443-450.

50293 Bates, MN 2007, 'Registry-based case-control study of cancer in California firefighters', *American Journal of Industrial Medicine*, vol. 50, pp. 339-344.

27243 Battista, G et al. 1999, 'Mortality due to asbestos-related causes among railway carriage construction and repair workers', *Occupational Medicine*, vol. 49, pp. 536-539.

22496 Baysson, H et al. 2000, 'Epidemiological response to a suspected excess of cancer among a group of workers exposed to multiple radiological and chemical hazards', *Occupational & Environmental Medicine*, vol. 57, pp. 188-194.

65058 Beane Freeman, LE et al. 2005, 'Cancer incidence among male pesticide applicators in the agricultural health study cohort exposed to diazinon', *American Journal of Epidemiology*, vol. 162, no. 11, pp. 1070-1079. **Comms**

63464 Beane Freeman, LE et al. 2011, 'Atrazine and cancer incidence among pesticide applicators in the Agricultural Health Study 1994-2007', *Environmental Health Perspectives*, vol. 119, no. 9, pp. 1253-1259.

63845 63848 Beane Freeman, LE et al. 2012, 'Poultry and livestock exposure and cancer risk among farmers in the agricultural health study', *Cancer Causes & Control*, Epub ahead of print.

29721 Beard, J et al. 2003, 'Health impacts of pesticide exposure in a cohort of outdoor workers', *Environmental Health Perspectives*, vol. 111, no. 5, pp. 724-730.

26350 Becker, N et al.2001, 'Asbestos exposure and malignant lymphomas--a review of the epidemiological literature', *International Archives of Occupational and Environmental Health*, vol. 74, no. 7, pp. 459-469.

53838 Becker, S et al. 2009, 'Obesity and related hyperinsulinaemia and hyperglycaemia and cancer development', *Archives of Physiological and Biochemistry*, vol. 115, no. 2, pp. 86-96.

22502 Berenson, JR 1999, 'Etiology of multiple myeloma: what's new', *Seminars in Oncology*, vol. 26, no. 5, suppl. 13, pp. 2-7.

26931 Berenson, JR 2001, 'Advances in the biology and treatment of myeloma bone disease', *American Journal of Health-System Pharmacy*, vol. 58, suppl. 3, pp. S16-S20.

22516 Berenson, JR et al. 1999, 'Initiation and maintenance of multiple myeloma', *Seminars in Hematology*, vol. 36, no. 1, suppl. 3, pp. 9-13.

60969 Berenson, JR et al. 2010, 'Monoclonal gammopathy of undetermined significance: a consensus statement', *British Journal of Haematology*, vol. 150, pp. 28-38.

22505 26825 Bergsagel, DE et al. 1999, 'Benzene and multiple myeloma: appraisal of the scientific evidence', *Blood*, vol. 94, no. 4, pp. 1174-1182.

26930 Bergsagel, PL Kuehl, WM 2001, 'Chromosone translations in multiple myeloma', *Oncogene*, vol. 20, pp. 5611-5622.

14464 Berlin, K et al. 1995, 'Cancer incidence and mortality of patients with suspected solvent-related disorders', *Scandinavian Journal of Work, Environment & Health*, vol. 21, pp. 362-367.

3053 Bertazzi, PA et al. 1993, 'Cancer incidence in a population accidentally exposed to 2,3,7,8-Tetrachlorodibenzo-para-dioxin', *Epidemiology*, vol. 4, no. 5, pp. 398-406. **Comms**

12982 Bertazzi, PA et al. 1997, 'Dioxin exposure and cancer risk: a 15-year mortality study after the Seveso Accident', *Epidemiology*, vol. 8, no. 6, pp. 646-652. **Comms**

14329 Bertazzi, PA et al. 1998, 'The Seveso studies on early and long-term effects of dioxin exposure: a review', *Environmental Health Perspectives*, vol. 106, suppl. 2, pp. 625-633. **Comms**

22514 Bertazzi, PA et al. 1999, 'Dioxin exposure and human leukemias and lymphomas. Lessons from the Seveso accident and studies on industrial workers', *Leukemia*, vol. 13, suppl. 1, pp. S72-S74.

25817 Bertazzi, PA et al. 2001, 'Health effects of dioxin exposure: a 20-year mortality study', *American Journal of Epidemiology*, vol. 153, no. 11, pp. 1031-1044. **Comms**

25816 Bertazzi, PA et al. 2001, [COMMENT] 'Response to Smith and Lopipero', *American Journal of Epidemiology*, vol. 153, no.11, pp. 1048-1049.

17954 Bertoni-Salateo, R et al.1998, [ABSTRACT] 'Solitary plasmocytoma of bone in an adolescent', *Journal of Pediatric Hematology/Oncology*, vol. 20, no. 6, pp. 574-576.

2744 Bethwaite, PB et al. 1990, 'Cancer risk in painters: study based on the New Zealand Cancer Registry', *British Journal of Industrial Medicine*, vol. 47, pp. 742-746.

12926 Bezabeh, S et al. 1996, 'Does benzene cause multiple myeloma? An analysis of the published case-control literature', *Environmental Health Perspectives*, vol. 104, suppl. 6, pp. 1393-1398.

26822 Bianchini, G et al. 1999, 'IgA myeloma: a potential outcome of IgA nephropathy', *Nephrology Dialysis Transplantation*, vol. 14, no. 11, pp. 2780-2782.

67128 Birmann, BM et al 2007, 'Body mass index, physical activity, and risk of multiple myeloma', *Cancer Epidemiology, Biomarkers & Prevention*, vol. 16, no. 7, pp. 1474-1478.

26136 Bjornadal, L et al. 2002, ' Increased cancer incidence in a Swedish cohort of patients with systemic lupus erythematosus', *Scandinavian Journal of Rheumatology*, vol.31, no. 2, pp. 66-71.

959 3312 Blair, A et al. 1992, 'Clues to cancer etiology from studies of farmers', *Scandinavian Journal of Work, Environment & Health*, vol. 18, pp. 209-215.

14763 Blair, A et al. 1998, 'Mortality and cancer incidence of aircraft maintenance workers exposed to trichloroethylene and other organic solvents and chemicals: extended follow up', *Occupational & Environmental Medicine*, vol. 55, no. 3, pp. 161-171.

47007 Blair, A et al. 2004, 'Mortality among participants in the Agricultural Health Study', *Annals of Epidemiology*, vol. 15, no. 15, pp. 279-285.

47608 Blair, A et al. 2005, 'Disease and injury among participants in the agricultural health study', *Journal of Agricultural Safety & Health*, vol. 11, no. 2, pp. 141-150.

58587 63167 Blair, A Freeman, LB 2009, 'Epidemiologic studies of cancer in agricultural populations: observations and future directions', *Journal of Agromedicine*, vol. 14, no. 2, pp. 125-131.

11027 Bland, JM 1994, 'Cancer in nuclear test veterans. Statistical analysis inappropriate', *British Medical Journal*. vol. 308, no. 6924, pp. 339-340.

52265 Bloemen, LJ et al. 2004, 'Lymphohaematopoietic cancer risk among chemical workers exposed to benzene' *Occupational & Environmental Medicine*, vol. 61, pp. 270-274.

15057 Boffetta, P 1997, 'Cancer risk from occupational and environmental exposure to polycyclic aromatic hydrocarbons', *Cancer Causes & Control*, vol. 8, pp. 444-472.

4615 Boffetta, P et al. 1989, 'A case-control study of multiple myeloma nested in the American cancer society prospective study', *International Journal of Cancer*, vol. 43, pp. 554-559.

26736 Boffetta, P et al. 2001, 'Occupational exposure to diesel engine emissions and risk of cancer in Swedish men and women', *Cancer Causes & Control*, vol. 12, no. 4, pp.365-374.

51906 Boffetta, P et al. 2008, 'Exposure to ultraviolet radiation and risk of malignant lymphoma and multiple myeloma - a multicentre European case-control study', *International Journal of Epidemiology*, vol. 37, pp.1080-1094.

67113 Boffetta, P et al. 2011, 'TCDD and cancer: a critical review of epidemiologic studies', *Critical Reviews in Toxicology*, vol. 7, pp. 622-636.

26737 Boffetta, P Kaldor, JM 1994, 'Secondary Malignancies Following Cancer Chemotherapy', *Acta Oncologica*, vol. 33, no. 6, pp. 591-598.

44983 Boice, JD 2001, 'Errors in TCE analysis', *Environmental Health Perspectives*, vol. 109, no. 3, pp. A108-A110.

30760 Boice, JD Jr et al. 1988, 'Radiation dose and second cancer risk in patients treated for cancer of the cervix', *Radiation Research*, vol. 116, pp. 3-55.

4554 Boice, JD Jr et al. 1991, 'Diagnostic x-ray procedures and risk of leukemia, lymphoma, and multiple myeloma', *Journal of the American Medical Association*, vol. 265, no. 10, pp. 1290-1294.

20637 Boice, JD Jr et al. 1999, 'Mortality among aircraft manufacturing workers', *Journal of Occupational and Environmental Medicine*, vol. 56, pp. 581-597.

64422 Boice, JD Jr et al. 2006, 'Mortality among Rocketdyne workers who tested rocket engines, 1948-1999', *Journal of Occupational and Environmental Medicine*, vol. 48, pp. 1070-1092.

54602 Bolognesi, C 2003, 'Genotoxicity of pesticides: a review of human biomonitoring studies', *Mutation Research*, vol. 543, pp. 251-272.

45662 Bonner, MR et al. 2007, 'Malathion exposure and the incidence of cancer in the agricultural health study', *American Journal of Epidemiology*, vol. 166, no. 9, pp. 1023-1034. **Comms**

63850 Bonner, MR et al. 2010, 'Occupational exposure to terbufos and the incidence of cancer in the agricultural health study', *Cancer Causes & Control*, vol. 21, no.6, pp. 871-877. **Comms**

52263 Boscoe, FP Schymura, MJ 2006, 'Solar ultraviolet-B exposure and cancer incidence and mortality in the United States, 1993-2002', *BioMed Centre Cancer*, vol.6, p. 264.

59935 Bosetti, C et al. 2009, 'Aspirin and cancer risk: a summary review to 2007', *Recent Results Cancer Research*, vol. 181, pp. 231-251.

4540 Bourguet, CC Logue, EE 1993, 'Antigenic stimulation and multiple myeloma', *Cancer*, vol. 72, no. 7, pp. 2148-2154.

27621 Brander, C et al. 2002, 'Absence of biologically important Kaposi sarcoma-associated herpesvirus gene products and virus-specific cellular immune responses in multiple myeloma', *Blood*, vol. 100, no. 2, pp. 698-700.

25032 Brautbar, N 2002, 'Benzene and Disease of the Blood: Revisited, accessed at http://www.environmentaldiseases.com/article_benzene_and diseases_of_the_blood.html

3047 Breslin, P et al. 1988, 'Proportionate mortality study of US army and US marine corps veterans of the Vietnam war', *Journal of Occupational Medicine*, vol. 30, no. 5, pp. 412-419.

60573 Brinton, LA 2007, 'The relationship of silicone breast implants and cancer at other sites', *Plastic and Reconstructive Surgery*, vol. 120, suppl. 1, pp. 94S-102S.

63140 Brinton, LA Brown, SL 1997, 'Breast implants and cancer', *Journal of the National Cancer Institute*, vol. 89, no. 18, pp. 1341-1349.

24910 Brinton, LA et al 2001, 'Cancer risk at sites other than the breast following augmentation mammoplasty', *Annals of Epidemiology*, vol. 11, pp. 248-256.

4573 Brown, LM et al. 1992, 'Alcohol consumption and risk of leukemia, non-Hodgkin's lymphoma, and multiple myeloma', *Leukemia Research*, vol. 16, no. 10, pp. 979-984.

4556 Brown, LM et al. 1992, 'Hair dye use and multiple myeloma in white men', *American Journal of Public Health*, vol. 82, no. 12, pp. 1673-1674.

4574 65060 Brown, LM et al. 1993, 'Pesticide exposures and multiple myeloma in Iowa men', *Cancer Causes & Control*, vol. 4, pp. 153-1536. **Comms**

15363 Brown, LM et al. 1997, 'Multiple myeloma among Blacks and Whites in the United States: role of cigarettes and alcoholic beverages', *Cancer Causes & Control*, vol. 8, no. 4, pp. 610-614.

22495 Brown, LM et al. 2001, 'Diet and nutrition as risk factors for multiple myeloma among blacks and whites in the United States', *Cancer Causes & Control*, vol. 12, pp. 117-125.

28383 Brown, LM et al. 2002, 'Exposures in the painting trades and paint manufacturing industry and risk of cancer among men and women in Sweden', *Journal of Occupational and Environmental Medicine*, vol. 44, no.3, pp. 258-264.

63852 Brown, LM et al. 2003, *Epidemiology of multiple myeloma. Neoplastic Diseases of the Blood*, 4th edn. pp. 434-45, Cambridge University Press, New York.

62393 Brown, LM et al. 2008, 'Risk of multiple myeloma and monoclonal gammopathy of undetermined significance among white and black male United States veterans with prior autoimmune, infectious, inflammatory, and allergic disorders', *Blood*, vol. 111, pp. 3388-3394.

65061 Brown, LM Everett, GD 1992, 'Hair dye use and multiple myeloma in white men', *American Journal of Public Health*, vol. 82, no. 12, pp. 1673-1674.

4557 Brownson, RC 1991, 'Cigarette smoking and risk of multiple myeloma', *Journal of the National Cancer Institute*, vol. 83, no. 14, pp. 1036-1037.

15941 Brownson, RC et al. 1989, 'Cancer risks among Missouri farmers', *Cancer*, vol. 64, pp. 2381-2386.

15942 Brownson, RC Reif, JS 1988, 'A cancer registry-based study of occupational risk for lymphoma, multiple myeloma and leukaemia', *International Journal of Epidemiology*, vol. 17, no. 1, pp. 27-32.

22471 Budinsky, RA et al, 1999, 'An evaluation of modelled benzene exposure and dose estimates published in the Chinese-National cancer institute collaborative epidemiology studies', *Regulatory Toxicology & Pharmacology*, vol. 30, pp. 244-258.

27622 Buhler, S et al. 2002, 'High rate of monoclonal gammopathy among immunocompetent subjects with primary cytomegalovirus infection', *Clinical Infectious Diseases*, vol. 35, no. 11, pp. 1430-1433.

15524 Burnett, CA et al. 1994, 'Mortality Among Fire Fighters: A 27 State Survey', *American Journal of Industrial Medicine*, vol. 26, pp. 831-833.

61729 Burns, CJ 1997, [COMMENT] 'Proportionate mortality study of golf course superintendents', *American Journal of Industrial Medicine*, vol. 32, p. 97, comment on ID: 51146.

26080 Burns, CJ et al. 2001, 'Mortality in chemical workers potentially exposed to 2,4-dichlorophenoxyacetic acid (2,4-D) 1945-94: an update', *Occupational and Environmental Medicine*, vol. 58, pp. 24-30. **Comms**

62245 Burns, CJ et al. 2005, [COMMENT] 'Re: Carcinogenic and genotoxic potential of turf pesticides commonly used on golf courses', *Journal of Toxicology and Environmental Health Part B*, vol. 8, no. 6, pp. 513-514, comment on ID: 61728.

63458 Caldwell, J et al. 2010, *Trichloroethylene (TCE)*. pp. 120-44. accessed at http://monographs.iarc.fr/ENG/Publications/techrep42/TR42-14.pdf

17119 Cantor, KP Blair, A 1984, 'Farming and mortality from multiple myeloma: a case-control study with the use of death certificates', *Journal of the National Cancer Institute*, vol. 72, no. 2, pp. 251-255.

27607 Cardarelli, J et al. 2002, 'Significance of radiation exposure from work-related chest x-rays for epidemiological studies of radiation workers', *American Journal of Industrial Medicine*, vol. 42, no. 6, pp. 490-501.

5770 Cardis, E et al. 1995, 'Effects of low doses and low dose rates of external ionizing radiation: Cancer mortality among nuclear industry workers in three countries', *Radiation Research*, vol. 1142, pp. 117-132.

43945 Cardis, E et al. 2007, 'The 15-country collaborative study of cancer risk among radiation workers in the nuclear industry: estimates of radiation-related cancer risks', *Radiation Research*, vol. 167, no. 4, pp. 96-416.

16797 Carpenter, LM et al. 1998, 'Cancer mortality in relation to monitoring for radionuclide exposure in three UK nuclear industry workforces', *British Journal of Cancer*, vol. 78, no. 9, pp. 1224-1232.

35952 Carr, ZA et al. 2002, 'Malignant neoplasms after radiation therapy for peptic ulcer', *Radiation Research*, vol. 157, pp. 668-677.

64420 Castillo, JJ et al. 2012, 'No association between cigarette smoking and incidence of plasma cell myeloma: a meta-analysis of 17 observational studies. *American Journal of Hematology*, vol. 87, no. 7, pp. 729-731.

26857 Cengiz, K 2002, 'Increased incidence of neoplasia in chronic renal failure (20-year experience)', *International Urology and Nephrology*, vol. 33, no. 1, pp.121-126.

26333 Cerhan, JR et al. 1998, 'Cancer mortality among Iowa farmers: recent results, time trends, and lifestyle factors, United States', *Cancer Causes & Control*, vol. 9, no. 3, pp. 311-319.

27277 Cesarman, E. 2002, 'The role of Kaposi's sarcoma-associated herpesvirus (KSHV/HHV-8) in lymphoproliferative diseases', *Recent Results Cancer Research*, vol. 159, pp. 27-37.

63210 Chang, ET et al. 2011, 'Adulthood residential ultraviolet radiation, sun sensitivity, dietary vitamin D, and risk of lymphoid malignancies in the California teachers study', *Blood*, vol. 118, no. 6, pp. 1591-1599.

17948 Chen, BP, 1997, [ABSTRACT] 'Delineation of the human hematolymphoid system: potential applications of defined cell populations in cellular therapy', *Immunological Reviews*, vol. 157, pp. 41-51.

10317 Chen, R, Seaton, A 1996, 'A meta-analysis of mortality among workers exposed to organic solvents', *Occupational Medicine*, vol. 46, no. 337-344.

26901 Chen, R, Seaton, A 1998, A meta-analysis of painting exposure and cancer mortality', *Cancer Detection and Prevention*, vol. 22, no. 6, pp. 533-539.

15417 Chiazze, L et al. 1980, 'Mortality among automobile assembly workers', *Journal of Occupational Medicine*, vol. 22, no. 8, pp. 520-526.

52249 Chiu, BC-H et al. 2004, 'Agricultural pesticide use, familial cancer, and risk of non-Hodgkin lymphoma', *Cancer Epidemiology, Biomarkers & Prevention*, vol. 13, no. 4, pp. 525-531.

52532 Chiu, WA et al. 2006, 'Key scientific issues in the health risk assessment of trichloroethylene', *Environmental Health Perspectives*, vol. 114, no. 9, pp. 1445-1449.

60978 Chng, WJ et al. 2007, 'Genetic events in the pathogenesis of multiple myeloma', *Best Practice & Research Clinical Haematology*, vol. 20, no. 4, pp.571-596.

60970 Choi, JW et al. 2010, 'Early onset multiple myeloma in a patient with systemic lupus erythematosus: a case report and literature review', *Clinical Rheumatology*, vol. 29, pp. 1323-1326.

65062 Christensen, CH et al. 2010, 'Coumaphos exposure and incident cancer among male participants in the agricultural health study', *Environmental Health Perspectives*, vol. 118, no. 1, pp. 92-96.

3241 12969 Christie, D et al. 1991, 'A prospective study in the Australian petroleum industry. II Incidence of cancer', *British Journal of Industrial Medicine*, vol. 48, pp. 511-514.

12968 Christie, D et al. 1991, 'A prospective study in the Australian petroleum industry. I Mortality', *British Journal of Industrial Medicine*, vol. 48, pp. 507-510.

4606 Chucrallah, AE et al. 1994, 'Multiple myeloma after cardiac transplantation: An unusual form of posttransplant lymphoproliferative disorder', *Human Pathology*, vol. 25, no. 5, pp. 541-545.

63166 Chumak, VV et al. 2008, 'The Ukrainian-American study of Leukemia and related disorders among Chornobyl cleanup workers from Ukraine: II. Estimation of bone marrow doses', *Radiation Research*, vol. 170, no. 6, pp. 698-610.

50730 Clapp, RW et al. 2008, 'Environmental and occupational causes of cancer: new evidence 2005-2007', *Reviews on Environmental Health*, vol. 23, no. 1, pp. 1-37.

17944 Clavel, J et al. 1996, [ABSTRACT] 'Hairy cell leukaemia and occupational exposure to benzene', *Occupational & Environmental Medicine*, vol. 53, no. 8, pp. 533-539.

15939 Cocco, P et al. 1997, 'Proportional mortality of dichloro-diphenyl-trichloroethane (DDT) workers: a preliminary report', *Archives of Environmental Health*, vol. 52, no. 4, pp. 299-303.

26882 Cocco, P et al. 2000, 'Cancer mortality and environmental exposure to DDE in the United States', *Environmental Health Perspectives*, vol. 108, no. 1, pp. 1-4.

44867 Cocco, P et al. 2005, 'Cancer mortality among men occupationally exposed to dichlorodiphenyltrichloroethane', *Cancer Research*, vol. 65, no. 20, pp. 9588-9594.

62555 Cocco, P et al. 2010, 'Occupational exposure to solvents and risk of lymphoma subtypes: results from the Epilymph case-control study', *Occupational and Environmental Medicine*, vol. 67, pp. 341-347.

38773 Coggon, D et al. 2004, 'Mortality of workers exposed to ethylene oxide: extended follow up of a British cohort', *Occupational and Environmental Medicine*, vol. 61, pp. 358-362.

62090 62169 Cogliano, VJ et al. 2011, 'Updating IARC's carcinogenicity assessment of benzene', *American Journal of Industrial Medicine*, vol. 54, pp. 165-167.

4614 Cohen, HJ et al. 1987, 'Role of immune stimulation in the etiology of multiple myeloma: A case-control study', *American Journal of Hematology*, vol. 24, pp. 119-126.

13001 Collingwood, KW et al. 1996, 'An updated cohort mortality study of workers at a northeastern United States petroleum refinery', 'International *Archives of Occupational & Environmental Health*, vol. 68, no. 5, pp. 277-288.

24994 Collins, JJ Acquavella, JF 1998, 'Review and meta-analysis of studies of acrylonitrile workers', *Scandinavian Journal of Work & Environmental Health*, vol. 24, suppl. 2, pp. 71-80.

54702 Collins, JJ et al. 2003, 'Lymphohaematopoeitic cancer mortality among workers with benzene exposure', *Occupational and Environmental Medicine*, vol. 60, pp. 676-679.

50746 Colt, JS et al. 2007, 'Hobbies with solvent exposure and risk of non-Hodgkin lymphoma', *Cancer Causes & Control*, vol. 18, pp. 385-390.

53318 Committee on Contaminated Drinking Water at Camp Lejeune; National Research Council, 2009, *Contaminated water supplies at Camp Lejeune: assessing potential health effects*, National Academy Press, Washington, DC.

58017 Committee to Review EPA's Toxicological Assessment of Tetrachloroethylene; National Research Council, 2010, *Review of the Environmental Protection Agency's draft IRIS assessment of tetrachloroethylene*, pp. 3-11, pp. 44-49, pp. 105-23, The National Academic Press, Washington DC.

55675 Consonni, D et al. 2008, 'Mortality in a population exposed to dioxin after the Seveso, Italy accident in 1976: 25 years of follow-up', *American Journal of Epidemiology*, vol. 167, no. 7, pp. 847-858. **Comms**

60465 Constantini, AS et al. 2008, 'Risk of leukemia and multiple myeloma associated with exposure to benzene and other organic solvents: evidence from the Italian Multicenter Case-Control Study', *American Journal of Industrial Medicine*, vol. 51, pp. 803-811.

27875 Conti, S et al. 2002, [LETTER] 'Excess mortality from liver disease and other non-AIDS-related diseases among HIV-infected individuals in Italy', *Journal of Acquired Immune Deficiency Syndromes*, vol. 29, no. 1, pp. 105-107.

24998 Cooksley, CD et al. 1999, 'HIV-related malignancies: community-based study using linkage of cancer registry and HIV registry data', *International Journal of STD & AIDS*, vol. 10, pp. 795-802.

52243 Cooper GS, Jones, S 2008, 'Pentachlorophenol and cancer risk: focusing the lens on specific chlorophenols and contaminants', *Environmental Health Perspectives*, vol. 116, no. 8, pp. 1001-1008.

21127 Cooper, D et al. 2001, [COMMENT] 'Re: cancer incidence near radio and television transmitters in Great Britain, Sutton Colfield transmitter; 11, all high power transmitters', *American Journal of Epidemiology*, vol. 153, no. 2, pp. 202-204, Erratum, 2007, *American Journal of Epidemiology*, vol. 166, p. 1107.

22500 26138 Correa, A et al. 2000, 'Use of hair dyes, hematopoietic neoplasms, and lymphomas: a literature review. 11. Lymphomas and multiple myeloma', *Cancer Investigatgationigations*, vol. 18, no. 5, pp. 467-479.

26167 Costantini, AS et al. 2001, 'A multicenter case-control study in Italy on hematolymphopoietic neoplasms and occupation', *Epidemiology*, vol. 12, no. 1, pp. 78-87.

54760 Costantini, AS et al. 2008, 'Risk of leukemia and multiple myeloma associated with exposure to benzene and other organic solvents: evidence from the Italian multicenter case-control study', *American Journal of Industrial Medicine*, vol. 51, pp. 803-811.

26143 Cottone, M et al. 1999, 'Mortality and causes of death in celiac disease in a Mediterranean area', *Digestive Diseases and Sciences*, vol. 44, no. 12, pp. 2538-2541.

4546 Council on Scientific Affairs, 1988, 'Cancer risk of pesticides in agricultural workers - Council Report', *Journal of the American Medical Association*, vol. 260, no. 7, pp. 959-966.

65057 Cozen, W et al. 2006, 'Interleukin-6-related genotypes, body mass index, and risk of multiple myeloma and plasmacytoma', *Cancer Epidemiology, Biomarkers & Prevention*, vol. 15, no. 11, pp. 2285-2291.

12256 Crane, PJ et al. 1997, *Mortality of Vietnam Veterans: The veteran cohort study*, Commonwealth Department of Veterans' Affairs.

34524 Crump, KS 1996, 'Risk of benzene-induced leukemia predicted from the Pliofilm cohort', *Environmental Health Perspectives*, vol. 104, suppl. 6, pp. 1437-1441.

27275 Cunha, A et al. 2001, 'Low incidence of human herpesvirus 8 in bone marrow samples from Brazilian patients with multiple myeloma', *Acta Haematologica Polonica*, vol. 105, no. 4, pp. 247-248.

4563 Cuzick, J 1981, 'Radiation-induced myelomatosis', *New England Journal of Medicine*, vol. 304, no. 4, pp. 204-210.

4605 Cuzick, J 1994, 'Multiple myeloma', in *Trends in Cancer Incidence and Mortality. Cancer Surveys*, vol. 29/30, pp. 455-74, Doll, R et al. (eds). Cold Spring Harbor Laboratory Press, New York.

15423 Cuzick, J De Stavola, B 1988, 'Multiple myeloma- a case-control study', *British Journal of Cancer*, vol. 57, pp. 516-520.

63757 Cypel, Y Kang, AH 2010, 'Mortality patterns of army chemical corps veterans who were occupationally exposed to herbicides in Vietnam', *Annals of Epidemiology*, vol. 20, pp. 339-346. **Comms**

36010 Czene, K et al. 2003, 'Cancer risks in hairdressers: assessment of carcinogenicity of hair dyes and gels', *International Journal of Cancer*, vol. 105, pp. 108-112.

26855 Dainiak, N 2002, 'Hematologic consequences of exposure to ionizing radiation', *Experimental Hematology*, vol. 30, no. 6, pp. 513-528.

26829 Dal Maso, L Franceschi, S 2003, 'Epidemiology of non-Hodgkin lymphomas and other haemolymphopoietic neoplasms in people with AIDS', *Lancet Oncology*, vol. 4, no. 2, pp.110-119.

52240 Dal Maso, L Franceschi, S 2006, 'Hepatitic C virus and risk of lymphoma and other lymphoid neoplasms: a meta-analysis of epidemiologic studies', *Cancer Epidemiology, Biomarkers & Prevention*, vol. 15, no. 11, pp. 2078-2085.

15416 Dalager, NA et al. 1980, 'Cancer mortality among workers exposed to zinc chromate paints', *Journal of Occupational Medicine*, vol. 22, no. 1, pp 25-29.

15214 Dalager, NA Kang, HK 1997, 'Mortality among army chemical corps Vietnam Veterans', *American Journal of Industrial Medicine*, vol. 31, pp. 719-726. **Comms**

17956 Dalgleish, A 1999, [ABSTRACT] The relevance of non-linear mathematics (chaos theory) to the treatment of cancer, the role of the immune response and the potential for vaccines. Oxford Journals Medicine, vol. 92, no. 6, pp. 347-359.

7436 Damber, L et al. 1995, 'A cohort study with regard to the risk of haematological malignancies in patients treated with x-rays for benign lesions in the locomotor system', *Acta Oncologica*, vol. 34, no. 6, pp. 713-719.

26537 Darby, S et al. 1993, 'Further follow up of mortality and incidence of cancer in men from the United Kingdom who participated in the United Kingdom's atmospheric nuclear weapons tests and experimental programmes', *British Medical Journal*, vol. 307, pp. 1530-1535.

6753 Darby, SC et al. 1988, 'A summary of mortality and incidence of cancer in men from the United Kingdom who participated in the United Kingdom's atmospheric nuclear weapon tests and experimental programmes', *British Medical Journal*, vol. 296, pp. 332-328.

7374 Darby, SC et al. 1994, 'Mortality in a cohort of women given x-ray therapy for metrpathia haemorrhagica', *International Journal of Cancer*, vol. 56, pp. 793-801.

18612 Daunt, N 2000, 'Lack of evidence of risk from low-level radiation', *Medical Journal of Australia*, vol. 172, p. 351.

26899 Davies, FE et al. 1999, 'Fiction-TSA analysis of the B-cell compartment in myeloma shows no significant expansion of myeloma precursor cells', *British Journal of Haematology*, vol. 106, pp. 40-46.

26896 Davies, FE et al. 2000, 'Controversies surrounding the clonogenic origin of multiple myeloma', *British Journal of Haematology*, vol. 110, no. 1, pp. 240-241.

14085 Dean, G 1994, 'Deaths from primary brain cancers, lymphatic and haematopoietic cancers in agricultural workers in the Republic of Ireland', *Journal of Epidemiology &. Community Health*, vol. 48, pp. 364-368.

27623 Debes-Marun, CS et al. 2003, 'Chromosome abnormalities clustering and its implications for pathogenesis and prognosis in myeloma', *Leukemia*, vol. 17, no. 2, pp. 427-436.

13047 Decoufle, P et al. 1983, 'Mortality among chemical workers exposed to benzene and other agents', *Environmental Research*, vol. 30, no. 1, pp. 16-25.

53819 Delancey, JO et al. 2009, 'Occupational exposure to metribuzin and the incidence of cancer in the agricultural health study', *Annals of Epidemiology*, vol. 19, pp. 388-395.

15358 Delzell, E 1996, 'Beyond social class', *Epidemiology*, vol. 7, no. 1, pp. 1-3.

50732 Delzell, E et al. 2006, 'An updated study of mortality among north American synthetic rubber industry workers', *Research Report Health Effects Institute*, vol. 132, pp. 1-63.

14461 Delzell, E Grufferman, S 1985, 'Mortality among white and nonwhite farmers in North Carolina, 1976-1978', *American Journal of Epidemiology*, vol. 121, no. 3, pp. 391-402.

15380 Dement, JM et al. 1998, 'Proportionate mortality among union members employed at three Texas refineries', *American Journal of Industrial Medicine*, vol. 33, no. 4, pp. 327-340.

63141 Dement, JM et al. 2009, 'Mortality of older construction and craft workers employed at Department of Energy (DOE) nuclear sites', *American Journal of Industrial Medicine*, vol. 52, pp. 671-682.

4547 Demers, PA et al. 1993, 'A case-control study of multiple myeloma and occupation', *American Journal of Industrial Medicine*, vol. 23, no. 4, pp. 629-639.

4597 Demers, PA et al. 1995, 'Pooled reanalysis of cancer mortality among five cohorts of workers in wood-related industries', *Scandinavian Journal of Work, Environment & Health*, vol. 21, no. 3, pp. 179-190.

50742 Demers, PA et al. 2006, 'Cancer and occupational exposure to pentachlorophenol and tetrachlorophenol, Canada', *Cancer Causes & Control*, vol. 17, pp. 749-758.

15903 Demiroglu, H 1997, 'Early age at onset in multiple myeloma and aetiological considerations in Turkey', *European Journal of Haematology*, vol. 58, pp. 291-292.

38765 Descatha, A et al. 2005, 'Occupational exposures and haematological malignancies: overview on human recent data', *Cancer Causes & Control*, vol. 16, pp. 939-953.

13223 Dich, J et al. 1997, 'Pesticides and cancer', *Cancer Causes & Control*, vol. 8, no. 3, pp. 420-443.

62064 Dingli, D et al. 2006, 'Immunoglobulin free light chains and solitary plasmacytoma of bone', *Blood*, vol. 108, pp. 1979-1983.

65052 Dispenzieri, A 2005, 'POEMS Syndrome. Plasma cell disorders: atypical plasma cell syndromes', *American Society of Hematology*, pp. 360-367.

17955 Divine, BJ et al. 1999, 'Update of the Texaco mortality study
24897 1947-93: part II. Analyses of specific causes of death for white men employed in refining, research, and petrochemicals', *Occupational and Environmental Medicine*, vol. 56, pp. 174-180.

24932 Divine, BJ et al. 1999, 'Update of the Texaco mortality study 1947-93: part 1. Analysis of overall patterns of mortality among refining, research, and petrochemical workers', *Occupational Environmental Medicine*, vol. 56, pp. 167-173.

26176 Divine, BJ Hartman, CM 2001, 'A cohort mortality study among workers at a 1,3 butadiene facility', *Chemico-Biological Interactions*, vol. 135-136, pp. 535-553.

13142 Divine, BJ Hartmen, CM 1996, 'Mortality update of butadiene production workers', *Toxicology*, vol. 113, pp. 169-181.

64082 D'Mello, TA Yamane, GK 2007, 'Occupational jet fuel
62549 exposure and invasive cancer occurrence in the United States Air Force 1989-2003', *Air Force Institute for Operational Health*, pp. 1-18.
.

9620 Dolk, H et al. 1997, 'Cancer incidence near radio and television transmitters in Great Britain. I. Sutton Coldfield Transmitter', *American Journal of Epidemiology*, vol. 145, no. 1, pp. 1-9.

9621 Dolk, H et al. 1997, 'Cancer incidence near radio and television transmitters in Great Britain. II. All High Power Transmitters', *American Journal of Epidemiology*, vol. 145, no. 1, pp. 10-17.

22494 Domingo, JM 1999, 'Hepatitis C virus infection and mixed cryoglobulinemia in patients with lymphoproliferative diseases', *Haematologica*, vol. 84, no. 1, pp. 94-96.

26885 Dong, Y et al. 1998, 'Primary Sjogren's syndrome and its lymphoid malignancy: a report of four cases', *Chinese Medical Journal*, vol. 11, no. 3, pp. 218-219.

4613 Doody, MM et al. 1996, '1992, 'Leukemia, lymphoma and multiple myeloma following selected medical conditions', *Cancer Causes & Control*, vol. 3, pp. 449-456.

10902 Doody, MM et al. 1996, 'Risks of non Hodgkin's lymphoma, multiple myeloma, and leukemia associated with common medications', *Epidemiology*, vol. 7, no. 2, pp. 131-139.

63143 Dost, A et al. 2007, 'A cohort mortality and cancer incidence survey of recent entrants (1982-91) to the UK rubber industry: findings for 1983-2004', *Occupational Medicine*, vol. 57, pp. 186-190.

15937 Douglas, AJ et al. 1994, 'Cancer mortality and morbidity among workers at the sellafield plant of British nuclear fuels', *British Journal of Cancer*, vol. 70, pp. 1232-1243.

26843 Drach, J et al. 2000, 'The biology of multiple myeloma', *Journal of Cancer Research and Clinical Oncology*, vol. 126, no. 8, pp. 441-447.

50741 Dreiher, J Kordysh, E 2006, 'Non-Hodgkin lymphoma and pesticide exposure: 25 years of research', *Acta Haematologica Polonica*, vol. 116, pp. 153-164.

26846 Drexler, HG Matsuo, Y 2000, 'Malignant hematopoietic cell lines: in vitro models for the study of multiple myeloma and plasma cell leukemia', *Leukemia Research*, vol. 24, no. 8, pp. 681-703.

25386 Dreyer, NA et al. 1999, [COMMENT] 'Cause-specific mortality in cellular telephone users', *Journal of the American Medical Association*, vol. 282, no. 19, pp. 814-816.

26104 Dupree-Ellis, E et al. 2000, 'External radiation exposure and mortality in a cohort of uranium processing workers', *American Jouranl of Epidemiology*, vol. 152, no. 1, pp. 91-95.

12813 Durie, BG 1996, *Multiple myeloma. a concise review of the disease and treatment options*, International Myeloma Foundation, Los Angeles.

27534 Durie, BG 2001, 'The epidemiology of multiple myeloma', *Seminars in Hematology*, vol. 38, no. 2, suppl. 3, pp 1-5.

62066 Durie, BG et al. 2003, 'Myeloma management guidelines: a consensus report fro the Scientific Advisors of the International Myeloma Foundation', *The Hematology Journal*, vol. 4, no. 379-398.

26367 Elwood, JM 1999, [COMMENT] 'Radiofrequency exposure and human cancers', *Environmental Health Perspectives*, vol. 107, no. 12, p. A597.

26009 Elwood, JM. 1999, 'A critical review of epidemiologic studies of radiofrequency exposure and human cancers', *Environmental Health Perspectives*, vol. 107, suppl. 1, pp. 155-168.

63462 Engel, LS et al. 2005, 'Pesticide use and breast cancer risk among farmers' wives in the Agricultural Health Study', *American Journal of Epidemiology*, vol. 161, no. 2, pp. 121-135.

15433 Engholm, G et al. 1987, 'Cancer incidence and mortality among Swedish painters', *Scandinavian Journal of Work, Environment & Health*, vol. 13. p. 181.

15770 Englund, A 1980, 'Cancer incidence among painters and some allied trades', *Journal of Toxicology Environmental Health*, vol. 6, pp. 1267-1273.

4559 Eriksson, M 1993, 'Rheumatoid arthritis as a risk factor for multiple myeloma: A case-control study', *European Journal of Cancer*, vol. 29A, no. 2, pp. 259-263.

4548 Eriksson, M Karlsson, M 1992, 'Occupational and other environmental factors and multiple myeloma: A population based case-control study', *British Journal of Industrial Medicine*, vol. 49, pp. 95-103. **Comms**

65067 Farmer, DR et al. 2005, 'Glyphosate results revisited', *Environmental Health Perspectives*, vol. 113, no. 6, pp. A365-A366.

5025 Faustini, A et al. 1993, 'Cohort study of mortality among farmers and agricultural workers', *La medidna del lavoro*, vol. 84, pp. 31-41.

22301 Fayerweather, WE et al. 1997, 'Case-control study of cancer risk in tetraethyl lead manufacturing', *American Journal of Industrial Medicine*, vol. 31, no. 1, pp. 28-35.

25401 Fear, NT et al. 1996, 'Cancer in electrical workers: an analysis of cancer registrations in England, 1981-87', *British Journal of Cancer*, vol. 73, no. 7, pp. 935-939.

60981 Feller, L 2009, 'Extramedullary myeloma in an HIV-seropositive subject. Literature review and report of an unusual case', *Head & Face Medicine*, vol. 5, p. 4
.

26826 Fernandez, E et al. 1999, 'Fish consumption and cancer risk', *American Journal of Clinical Nutrition*, vol. 70, no. 1, pp. 85-90.

64983 Fernberg, P, et al. 2007, 'Tobacco use, body mass index, and the risk of leukemia and multiple myeloma: a nationwide cohort study in Sweden', *Cancer Research*, vol. 67, no 12, pp. 5983-5986.

16192 Figgs, LW 1994, 'Risk of multiple myeloma by occupation and industry among men and women: a 24-State death certificate study', *Journal of Occupational Medicine*, vol. 36, no. 11, pp. 1210-1221.

4566 Filipovich, AH et al. 1980, 'Immunodeficiency in humans as a risk factor in the development of malignancy', *Preventive Medicine*, vol. 9, pp. 252-259.

15316 Fiorino, AS Atac, B 1997, 'Paraproteinemia, plasmacytoma, myeloma and HIV infection', *Leukemia*, vol. 11, pp. 2150-2156.

9922 Firth, HM et al. 1996, 'Male cancer incidence by occupation: New Zealand, 1972-1984', *International Journal of Epidemiology*, vol. 25, no. 1, pp. 14-21.

15310 Fischer, T et al 1996, 'Posttransplant lymphoproliferative disease after cardiac transplantation. Two unusual variants with predominantly plasmacytoid features', *Transplantation*, vol. 62, no. 11, pp. 1687-90.

26182 Fleming, LE et al. 1999, 'Cancer incidence in a cohort of licensed pesticide applicators in Florida', *Journal of Occupational and Environmental Medicine*, vol. 41, no. 4, pp. 279-288.

26115 Fleming, LE et al. 1999, 'Mortality in a cohort of licensed pesticide applicators in Florida', *Occupational and Environmental Medicine*, vol. 56, no. 1, pp. 14-21.

22475 Floderus, B et al. 1999, 'Occupational magnetic field exposure and site-specific cancer incidence: a Swedish cohort study', *Cancer Causes & Control*, vol. 10, pp. 323-332.

6818 Flodin, U et al. 1987, 'Multiple myeloma and engine exhausts, fresh wood, and creosote: A case-referent study', *American Journal of Industrial Medicine*, vol. 12, pp. 519-529.

26900 Fonseca, R et al. Cytogenetic abnormalities in multiple myeloma', *Hematology Oncology Clinics of North American*, vol. 13, no. 6, pp.1169-1180.

27878 Franceschi, S et al. 1998, [ABSTRACT] 'Risk of cancer other than Karposi's sarcoma and non-Hodgkins lymphoma in persons with AIDS in Italy. Cancer and AIDS registry linkage study', *British Journal of Cancer*, vol. 78, no.7, pp. 966-970.

26027 Franceschi, S et al. 1998, [COMMENT] 'Spectrum of AIDS-associated malignant disorders', *Lancet*, vol 352, no. 9131, pp. 906-907.

4565 Friedman, GD 1986, 'Multiple myeloma: relation to propoxyphene and other drugs, radiation and occupation', *International. Journal of Epidemiology*, vol. 15, no. 3, pp. 424-426.

4973 Friedman, GD 1993, 'Cigarette smoking, leukemia and multiple myeloma', *Annals of Epidemiology*, vol. 3, no. 4, pp. 425-428.

4572 Friedman, GD Herrinton, LJ 1994, 'Obesity and multiple myeloma', *Cancer Causes & Control*, vol. 5, pp. 479-483.

27879 Frisch, M et al 2001, 'AIDS-Cancer Match Registry Study. Association of cancer with AIDS-related immunosuppression in adults', *Journal of the American Medical Association*, vol. 285, no. 13, pp. 1736-1745.

12868 Fritschi, L et al. 1996, 'Lymphoma, myeloma and occupational: results of a case-control study', *International Journal of Cancer*, vol. 67, no. 4, pp. 498-503.

26849 Fritschi, L et al. 2002, 'Canadian Cancer Registries Epidemiology Research Group. Animal-related occupations and the risk of leukemia, myeloma, and non-Hodgkin's lymphoma in Canada', *Cancer Causes & Control*, vol. 13, no. 6, pp. 563-571.

62244 Frost, G et al. 2011, 'Mortality and cancer incidence among British agricultural pesticide users', *Occupational Medicine*, vol. 61, pp. 303-310.

11023 Fry, RJ 1996, 'Effects of low doses of radiation', *Health Physics*, vol. 70, no. 6, pp. 823-827.

26124 Fryzek, JP et al. 1999, 'Cancer risk among patients with finger and hand joint and temporo-mandibular joint prostheses in Denmark', *International Journal of Cancer*, vol. 81, no. 5, pp. 723-725.

13050 Fu, H et al. 1996, 'Cancer mortality among shoe manufacturing workers: an analysis of two cohorts', *Occupational & Environmental Medicine*, vol. 53, no. 6, pp. 394-398.

60693 Galbraith, D et al. 2010, 'Benzene and human health: a historical review and appraisal of associations with various diseases', *Critical Reviews in Toxicology*, vol. 40, no. S2, pp. 1-46.

15914 Gallagher, RP et al. 1983, 'Allergies and agricultural exposure as risk factors for multiple myeloma', *British Journal of Cancer*, vol. 48, pp. 853-857.

15640 Gallagher, RP Threlfall, WJ 1983, 'Cancer mortality in metal workers', *Canadian Medical Association Journal*, vol. 129, pp. 1191-1194.

15211 Gambini, GF et al. 1997, 'Cancer mortality among rice growers in Novara Province, Northern Italy', *American Journal of Industrial Medicine*, vol. 31, pp. 435-441.

26840 Gernone, A et al. 2002, 'Multiple myeloma and mycosis fungoides in the same patient: clinical, immunologic, and molecular studies', *Annals of Hematology*, vol. 81, pp. 326-331.

27276 Gharagozloo, S et al. 2001, 'Hepatitis C virus infection in patients with essential mixed cryoglobulinemia, multiple myeloma and chronic lymphocytic leukemia', *Pathology & Oncology Research*, vol. 7, no. 135-139.

62389 Ghosh, S et al. 2011, 'Multiple myeloma and occupational exposures. A population-based case-control study', *Journal of Occupational & Environmental Medicine*, vol. 53, no. 6, pp. 641-646.

26170 Gilbert, ES 2001, 'Invited commentary: studies of workers exposed to low doses of radiation', *American Journal of Epidemiology*, vol. 153, no. 4, pp. 319-321.

29477 Gilbert, ES et al. 1989, 'Mortality of workers at the Hanford Site: 1945-1981', *Health Physics*, vol. 56, no. 1, pp. 11-25.

23104 Giles, GG et al. 1984, 'Myeloproliferative and lymphoproliferative disorders in Tasmania, 1972-80: occupational and familial aspects', *Journal of the National Cancer Institute*, vol. 72, no. 6, pp. 1233-1240.

26864 Glass, D et al. 2000, 'Retrospective exposure assessment for benzene in the Australian petroleum industry', *Annals of Occupational Hygiene*, vol. 44, no. 4, pp. 301-320.

27532 Glass, D et al. 2001, 'Validation of exposure estimation for benzene in the Australian petroleum industry', *Toxicology and Industrial Health*, vol. 17, no. 4, pp. 113-127.

54758 Glass, D et al. 2004, [COMMENTS] 'Leukemia risk and relevant benzene exposure period', *American Journal of Industrial Medicine*, vol. 45, pp. 222-225, comments on ID: 54757.

38762 Glass, D et al. 2005, 'Health watch exposure estimates: Do they underestimate benzene exposure?', *Chemico-Biological Interactions*, vol. 153-4, pp. 23-32.

50702 Glass, D et al. 2006, 'The health watch case-control study of leukemia and benzene. The story so far', *Annals of the New York Acadamey of Scicences*, vol. 1076, pp. 80-89.

64982 Glass, D et al. 2009, *Final report on Queensland fire fighters' cancer incidence stud*', Monash University, Melbourne.

25879 Godward, S et al. 2001, 'Re: cellular telephones and cancer - a nationwide cohort study in Denmark', *Journal of the National Cancer Institute*, vol. 93, no. 11, pp. 878-879.

22499 Goedert, JJ 2000, 'The epidemiology of acquired immunodeficiency syndrome malignancies', *Seminars in Oncology*, vol. 27, no. 4, pp 390-401.

17384 Goedert, JJ et al. 1998, 'Spectrum of AIDS-associated malignant disorders', *The Lancet*, vol. 351, no. 9119, pp. 1833-1839.

64984 Gold, LS et al. 2010, 'Occupation and multiple myeloma: an occupation and industry analysis', *American Journal of Industrial Medicine*, vol. 53, no. 8, pp. 768-779.

64272 Gold, LS et al. 2011, 'The relationship between multiple myeloma and occupational exposure to six chlorinated solvents', *Occupational and Environmental Medicine*, vol. 68, no. 6, pp. 391-399.

17953 Goldberg, S et al. 1998, [ABSTRACT] 'The erythroid leukemias: a comparative study of erythroleukemia (FAB M6) and Di Guglielmo Disease', *American Journal of Clinical Oncology*, vol. 21, no. 1, pp. 42-47.

13000 13083 Golden, AL et al. 1995, 'The risk of cancer in firefighters', *Occupational Medicine*, vol. 10, no. 4, pp. 803-820.

60980 Goldin, LR Landgren, O 2009, 'Autoimmunity and lymphomagenesis', *International Journal of Cancer*, vol. 124, pp. 1497-1502.

26401 Goldsmith, JR 1995, 'Epidemiologic evidence of radiofrequency radiation (microwave) effects on health in military, broadcasting, and occupational studies', *International Journal of Occupational & Environmental Health*, vol. 1, no. 1, pp. 47-57.

14259 Goldsmith, JR 1997, 'Epidemiologic evidence relevant to radar (microwave) effects', *Environmental Health Perspectives*, vol. 105, suppl. 6, pp. 1579-1587.

60464 Goldstein, BD 2010, 'Benzene as a cause of lymphoproliferative disorders', *Chemico-Biological Interactions*, vol. 184, pp. 147-150.

22503 26823 Goldstein, BD Shalat, SL 2000, 'The causal relation between exposure and multiple myeloma', *Blood*, vol. 95, no. 4, pp. 1512-1514.

15497 Golstein, BD 1990, 'Is Exposure to Benzene a Cause of Human Multiple Myeloma?', *Annals of the New York Academy of Sciences*, vol. 609, pp. 225-230.

17950 Gordon, PH et al. 1997, [ABSTRACT] 'Lymphoproliferative disorders and motor neuron disease: an update', *Neurology*, vol. 48, no. 6, pp. 1671-1678.

52221 Gorini, G et al. 2007, 'Alcohol consumption and risk of Hodgkin's lymphoma and multiple myeloma: a multicentre case-control study', *Annals of Oncology*, vol. 18, pp. 143-148.

56046 Graff, JJ et al. 2005, 'Chemical exposures in the synthetic rubber industry and lymphohematopoietic cancer mortality', *Journal of Occupational and Environmental Medicine*, vol. 47, pp. 916-932.

4612 Gramenzi, A et al. 1991, 'Medical history and the risk of multiple myeloma', *British Journal of Cancer*, vol. 63, pp. 769-772.

52220 Grandin, L et al. 2008, 'UV radiation exposure, skin type and lymphoid malignancies: results of a French case-control study', *Cancer Causes & Control*, vol. 19, no. 3, pp. 305-315.

26827 Grant, WB 2000, [LETTER] 'Fish consumption, cancer, and alzheimer disease', *American Journal of Clinical Nutrition*, vol. 71, no. 2, pp. 599-600.

30803 Grant, WB 2003, Ecologic studies of solar UV-B radiation and cancer mortality rates', *Recent Results Cancer Research*, vol. 164, pp. 371-377.

15332 Grardel, B et al. 1997, 'Malignancy in patients with rheumatoid arthritis treated with methotrexate', *The Journal of Rheumatology*, vol. 24, no. 4, pp. 805-806.

64985 Graveling, RA Crawford, JO 2010, 'The Industrial Injuries Advisory Council. Occupational health risks in firefighters: Strategic consulting report: P530', *Institute of Occupation Medicine*'.

64818 Graveling, RA Crawford, JO 2012, 'Occupational health risks in firefighters. *Institute of Occupation Medicine*, Researching Consulting Services.

15639 Greene, MH et al. 1979, 'Cancer mortality among printing plant workers', *Environmental Research*, vol. 20, pp. 66-73.

26883 Gregersen, H et al. 2001, 'Multiple myeloma following an episode of community-acquired pneumococcal bacteraemia or meningitis', *Acts Pathologica et Immunologica Scandinavica*, vol. 109, no. 11, no. 797-800.

26891 Grey, M et al. 2000, 'IgA myeloma of donor origin arising 7 years after allogeneic renal transplant', British Journal of Haematology, vol. 108, no. 3, pp. 592-594.

3250 Gridley, G et al. 1993, 'Incidence of cancer among patients with rheumatoid arthritis', *Journal of the National Cancer Institute*, vol. 85, no. 4, pp. 307-311.

52517 Grosse, Y et al. 2007, 'Carcinogenicity of 1,3-butadiene, ethylene oxide, vinyl chloride, vinyl fluoride, and vinyl bromide', *Lancet Oncology*, vol. 8, no. 8, pp. 679-680.

25344 Groves, FD et al. 2002, 'Cancer in Korean War Navy technicians: mortality survey after 40 years', *American Journal of Epidemiology*, vol. 155, no. 9, pp. 810-818.

25531 Grulich, AE et al. 1999, 'Risk of cancer in people with AIDS', *AIDS*, vol. 13, no. 7, pp. 839-843.

27874 Grulich, AE et al. 2002, 'Rates of non-AIDS-defining cancers in people with HIV infection before and after AIDS diagnosis', *AIDS*, vol. 16, no. 8, pp. 1155-1161.

14456 Guberan, E et al. 1989, 'Disability, mortality, and incidence of cancer among Geneva painters and electricians: a historical prospective study', *British Journal of Industrial Medicine*, vol. 46, pp. 16-23.

62336 Guidotti, TL 1993, 'Mortality of urban firefighters in Alberta, 1927-1987', *American Journal of Industrial Medicine*, vol. 23, pp. 921-940.

50710 Guidotti, TL 2007, 'Evaluating causality for occupational cancers: the example of firefighters', *Occupational Medicine*, vol. 57, pp. 466-471.

63155 Gupta, A et al. 2004, 'Plasma cell myeloma variant of post-transplant lymphoproliferative disorder in a solid organ transplant recipient: a case report', *Nephrology Dialysis Transplantation*, vol. 19, no. 12, pp. 3186-3189.

26035 Hakansson, N et al. 2001, 'Occupational sunlight exposure and cancer incidence among Swedish construction workers', *Epidemiology*, vol. 12, no. 5, pp. 552-557.

26856 Hakansson, N et al. 2002, 'Cancer incidence and magnetic field exposure in industries using resistance welding in Sweden', *Occupational and Environmental Medicine*, vol. 59, no. 7, pp. 481-486.

15314 Hallek, M et al. 1998, 'Multiple myeloma: increasing evidence for a multistep transformation process', *Blood*, vol. 91, no. 1, pp. 3-21.

4549 Hansen, ES 1993, 'A follow-up study on the mortality of truck drivers', *American Journal of Industrial Medicine*, vol. 23, pp. 811-821.

29603 Hansen, ES et al. 1992, 'A cohort study on cancer incidence among Danish gardeners', *American Journal of Industrial Medicine*, vol. 21, no. 5, pp. 651-660.

53807 Hansen, ES et al. 2007, 'Time trends in cancer risk and pesticide exposure, a long-term follow-up of Danish gardeners', *Scandinavian Journal of Work, Environment & Health*, vol. 33, no. 6, pp. 465-469.

26184 Hansen, J et al. 2001, 'Cancer incidence among Danish workers exposed to trichloroethylene', *Journal of Occupational and vironmental Medicine*, vol. 43, no. 2, pp. 133-139.

25880 Hardell, L Mild, KH 2001, 'Re: cellular telephones and cancer - a nationwide cohort study in Denmark', *Journal of the National Cancer Institute*, vol. 93, no. 12, pp. 952-953.

37771 Harrex, WK et al. 2003, *Mortality of Korean War Veterans: the Veteran Cohort Study. A report of the 2002 retrospective cohort study of Australian veterans of the Korean War*, Department of Veterans' Affairs. Canberra.

17980 Harrison, JD Stather, JW 1996, 'The assessment of doses and effects from intakes of radioactive particles', *Journal of Anatomy*, vol. 189, pp. 521-530.

26139 Hartge, P 2000, 'Hair dyes, cancer, and epidemiology', *Cancer Investigatgation*, vol. 18, no. 4, p. 408.

11082 Hatch, M et al. 1997, [COMMENT] 'A Reevaluation of Cancer Incidence near the Three Mile Island Nuclear Plant', *Environmental Health Perspectives*, vol. 105, no. 1, p. 12.

26848 Hatcher, JL et al. 2001, 'Diagnostic radiation and the risk of multiple myeloma, United States,' *Cancer Causes & Control*, vol. 12, no. 8, pp. 755-761.

26839 Hausfater, P et al. 2000, 'Hepatitis C virus infection and lymphoproliferative diseases in France: a national study', *American Journal of Hematology*, vol. 64, no. 2, pp. 107-111.

26837 Hausfater, P et al. 2001, 'Hepatitis C virus infection and lymphoproliferative diseases: prospective study on 1,576 patients in France', *American Journal of Hematology*, vol. 64, no. 2, pp.168-171.

25131 Havas, M 2000, 'Biological effects of non-ionizing energy: a critical review of the reports by the US Institute of Environmental Health Sciences as National Research Council and the US National they relate to the broad realm of EMF bioeffects', *National Research Council Canada. Environmental Reviews*, vol. 8, no. 3, pp. 173-253, [ISSN 1208-6053].

14485 Hayes, RB et al. 1997, 'Benzene and the dose-related incidence of hematologic neoplasms in China', *Journal of the National Cancer Institute*, vol. 89, no.14, pp. 1065-1071.

14490 Hayes, RB et al. 1998, 'Re: benzene and the dose-related incidence of hematologic neoplasms in China', *Journal of the National Cancer Institute*, vol. 90, no. 6, pp. 469-471.

26177 Hayes, RB et al. 2000, 'Benzene and lymphohematopoietic malignancies in China', *Journal of Toxicology and Environmental Health*, vol. 61, nos. 5-6, pp. 419-432.

26594 Hayes, RB et al. 2001, 'Benzene and lymphohematopoietic malignancies in humans', *American Journal of Industrial Medicine*, vol. 40, no. 2, pp.117-126.

4571 Heineman, EF et al. 1992, 'A prospective study of tobacco use and multiple myeloma: evidence against an association', *Cancer Causes & Control*, vol. 3, pp. 31-36.

4570 Heineman, EF et al. 1992, 'Occupational risk factors for multiple myeloma among Danish men', *Cancer Causes & Control*, vol. 3, pp. 555-568.

26932 Hemminki, K 2002, [COMMENT] 'Re: familial multiple myeloma: a family study and review of the literature', *Journal of the National Cancer Institute*, vol. 94, no. 6, pp. 462-463.

4550 15904 Herrinton, L et al. 1994, 'Exposure of hair-colouring products and the risk of multiple myeloma', *American Journal of Public Health*, vol. 84, no. 7, pp. 1142-1144.

15303 Herrinton, LJ 1996, 'The epidemiology of monoclonal gammopathy of unknown significance: a review', *Current Topics in Microbiology & Immunology*, vol. 210, pp. 389-395.

4569 Herrinton, LJ et al. 1992, 'Comment - Smoking and multiple myeloma', *Cancer Causes & Control*, vol. 3, pp. 391-392.

63853 Herrinton, LJ et al. 1996, *Multiple myeloma*, Cancer Epidemiology and Prevention, 2nd edn. pp. 946-970, Oxford University Press, New York.

17949 Hess, M 1951, 'Paint Film Deffects: Their causes and cure', S65, pp. 173-193, Chapman & Hall, London.

15313 Hjalgrim, H et al. 1998, 'Incidence rates of classical Kaposi's sarcoma and multiple myeloma do not correlate', *British Journal of Cancer*, vol. 78, no. 3, pp. 419-420.

26366 Hocking, B 1999, [COMMENT] 'A critical review of epidemiologic studies of radiofrequency exposure and human cancers', *Environmental Health Perspectives*, vol. 107, no. 12, pp. A596-A597.

62338 Holm, LE et al. 1989, 'Cancer risk in population examined with diagnostic doses of 131I', *Journal of the National Cancer Institute*, vol. 84, no. 4, pp. 302-306.

8377 Holm, LE et al. 1991, 'Cancer risk after Iodine-131 therapy for hyperthyroidism', *Journal of the National Cancer Institute*, vol. 83, no. 15, pp. 1072-1077.

21476 Holohan, T 1999, [COMMENT] 'Non-Ionizing electromagnetic radiation and public health', *Irish Medical Journal*, vol. 92, no.7, pp. 421-422.

26075 Hooiveld, M et al. 1998, 'Second follow-up of a Dutch cohort occupationally exposed to phenoxy herbicides, chlorophenols, and contaminants', *American Journal of Epidemiology*, vol. 147, no. 9, pp. 891-901. **Comms**

25813 Hoover, RN 1999,. [COMMENT] 'Dioxin dilemmas', *Journal of the National Cancer Institute*, vol. 91, no. 9, pp. 745-746, comment on ID: 25814.

13341 Hotz, P Lauwerys, RR 1997, 'Hematopoietic and lymphatic malignancies in vehicle mechanics', *Critical Reviews in Toxicology*, vol. 27, no. 5, pp. 443-494.

15383 15641 Howe, GR Burch, JD 1990, 'Fire fighters and risk of cancer: an assessment and overview of the epidemiologic evidence', *American Journal of Epidemiology*, vol. 132, 6, pp. 1039-1050.

23105 Howe, GR Lindsay, JP 1983, 'A follow-up study of a ten-percent sample of the Canadian Labor Force. 1. Cancer Mortality in males, 1965-73', *Journal of the National Cancer Institute*, vol. 70, no.1, pp. 37-44.

17952 Huebner, WW et al. 1997, [ABSTRACT] 'Mortality experience of a young petrochemical industry cohort: 1979-1992 follow-up study of US-based employees', *Journal of Occupational & Environmental Medicine*, vol. 39, no. 10, pp. 970-982.

29518 IARC Monographs 1987, *Evaluation of the Carcinogenic Risks to Humans*, Overall Evaluations of Carcinogenicity: an updating of IARC Monographs, vol. 1-41, suppl. 7, International Agency for Research on Cancer, Lyon, France.

7439 IARC Monographs 1988, *Evaluation of carcinogenic risks to humans: Diesel and gasoline engine exhausts and some nitroarenes*, International Agency for Research on Cancer, vol. 46, pp. 98-153.

23043 IARC Monographs 1989, *Evaluation of Carcinogenic Risks to Humans: Some organic Solvents, Resin Monomers and Related Compounds, Pigments and Occupational Exposures in Paint Manufacture and Painting*, International Agency for Research on Cancer, vol. 47.
.

13267 IARC Monographs 1995, *Dry cleaning, some chlorinated solvents and other industrial chemicals*, International Agency for Research on Cancer, vol. 63, no. 3, pp.12-27, pp. 75-221.

64764 IARC Monographs 2012, *Chemical agents and related occupations. IARC Monographs on the evaluation of carcinogenic risks to humans, 100F Preamble: 30*, International Agency for Research on Cancer, Lyon France.

65049 IARC Monographs 1983, *Miscellaneous pesticides*, International Agency for Research on Cancer, vol. 30, p. 255.

7200 IARC Monographs 1987, *Evaluation of Carcinogenic Risks to Humans: Overall Evaluations of Carcinogenicity: An updating of IARC Monographs*, vol. 1-42, suppl. 7, International Agency for Research on Cancer. **Applicant Comms**

28312 IARC Monographs 1991, *Evaluation of carcinogenic risks to humans: occupational exposures in insecticide application, and some pesticides*, International Agency for Research on Cancer, vol. 53.

55908 IARC Monographs 1997, *Polychlorinated dibenzo-para-dioxins. - Polychlorinated dibenzo-para-dioxins and polychlorinated dibenzofurans*, vol. 8, pp. 137-95, and 335-43, IARC Press, Lyon, France. **Applicant**

63206 IARC Monographs 2010, *Occupational exposures of hairdressers and barbers and personal use of hair colourants. Some Aromatic Amines, Organic Dyes and Related Exposures*, International Agency for Research on Cancer, vol. 99, pp. 499-658.

60195 IARC Monographs 2010, *Painting, Firefighting, and Shiftwork. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*, International Agency for Research on Cancer, vol. 98.

65051 IARC Monographs 2012, *A Review of Human Carcinogens: Biological Agents*. International Agency for Research on Cancer, vol. 100B, pp. 177-178.

63459 IARC Monographs 2012, Agents classified by the International Agency for Research on Cancer, vol. 1-102. retrieved 27 February 2012, from http://monographs.iarc.fr/ENG/Classification/ClassificationsGroupOrder.pdf http://monographs.iarc.fr/ENG/Classification/ClassificationsAlphaOrder.pdf **Comms**

64768 IARC Monographs 2012, *Chemical agents and related occupations: Table 2.1 Cohort studies of industrial workers exposed to formaldehyde 100F 24-Table2.1*, retrieved 9 August 2012, from http://monographs.iarc.fr/ENG/Monographs/vol100F/100F

64774 IARC Working Group 2012, *Chemical agents and related occupations:*
Summary of Evaluations. 100F, retrieved 9 August 2012, from http://monographs.iarc.fr/ENG/Meetings/vol100F-evaluations.pdf

62419 Ichimaru, M et al.1982, 'Multiple myeloma among atomic bomb survivors in Hiroshima and Nagasaki, 1950-76: relationship to radiation dose absorbed by marrow', *Journal of the National Cancer Institute*, vol. 69, no. 2, pp. 323-328.

4575 Ichimaru. M Mabuchi, K 1991, 'Multiple myeloma among atomic bomb survivors, *Journal of Radiation Research*, suppl. 32, pp. 168-171.

24807 Independent Expert Group on Mobile Phones, 2000, *Mobile Phones and Health*, National Radiological Protection Board, Chilton, Didcot, England.

54832 Infante, PF 2006, 'Benzene exposure and multiple myeloma', *Annals of the New York Acadamy of Sciences*, vol. 1076, pp. 90-109.

63209 Infante, PF 2011, 'The IARC October 2009 evaluation of benzene carcinogenicity was incomplete and needs to be reconsidered', *American Journal of Industrial Medicine*, vol. 54, pp. 157-164.

3087 Inskip, PD et al. 1993, 'Leukemia, lymphoma and multiple myeloma after pelvic radiotherapy for benign disease', *Radiation Research*, vol. 135, pp. 108-124.

28394 Institute of Medicine 1994, *Veterans and Agent Orange: Health effects of herbicides used in Vietnam - Toxicity Profile of Cacodylic Acid*, National Academy Press: Washington, pp 185-189.

23044 Institute of Medicine 1998, *Veterans and Agent Orange: Update 1998*, National Academy Press, Washington DC.

28326 Institute of Medicine 2002, [PREPUBLICATION COPY] 'Veterans and Agent Orange: Update 2002. National Assessment Program, Washington, USA. pp 273-277 (complete copy of this publication held in RMA Library at ref H26).

67476 Institute of Medicine 2011, *Veterans and Agent Orange. Update 2010*, chap, 7, pp. 405-412, National Academies Press, Washington, DC.

24206 International Commission on non-ionizing radiation protection 1998, 'Guidelines for limiting exposure to time-carying electric, magnetic and electromagnetic fields (up to 300 GHz)', *Health Physics*, vol. 74, no. 4, pp. 494-522.

14607 Ireland, B et al. 1997, 'Cancer mortality among workers with benzene exposure', *Epidemiology*, vol. 8, no. 3, pp. 318-320.

6661 Isaacson, PP 1994, [EDITORIAL] *Gastric lymphoma and helicobacter pylori*, *New England Journal of Medicine*, vol. 330, no. 18, pp. 1310-1311.

26830 Iwasaki, T et al. 2003, 'Second analysis of mortality of nuclear industry workers in Japan, 1986-1997', *Radiation Research*, vol. 159, no. 2, pp. 228-238.

15318 Jaccard, A et al. 1998, 'Human herpesvirus-8 and relatives of patients with plasmocytic diseases', *Blood*, vol. 92, no. 9, p. 3488.

27802 Jackman, SM et al. 2002, 'DNA damage assessment by comet assay of human lymphocytes exposed to jet propulsion fuels', *Environmental & Molecular Mutagenesis*, vol. 40, pp. 18-23.

15696 Jarvholm, B et al. 1997, 'Cancer incidence of workers in the Swedish petroleum industry', *Occupational and Environmental Medicine*, vol. 54, pp. 686-691.

15634 Jauchem, JR 1998, 'Health effects of microwave exposures: a review of the recent (1995-1998) literature', *Journal of Microwave Power & Electromagnetic Energy*, vol. 33, no. 4, pp. 263-274.

25881 Johansen, C et al. 2001, 'Cellular telephones and cancer--a nationwide cohort study in Denmark', *Journal of the National Cancer Institute*, vol. 93, no. 3, pp. 203-207.

15425 Johansen, C Olsen, JH 1998, 'Risk of cancer among Danish utility workers-a nationwide cohort study', *American Journal of Epidemiology*, vol. 147, no. 6, pp. 548-555.

11770 Johnson, JC et al. 1997, 'Mortality of veteran participants in the crossroads nuclear test', *Health Physics*, vol. 73, 1, pp. 187-189.

4560 Joseph, G et al. 1994, 'Posttransplantation plasma cell dyscrasias', *Cancer*, vol. 74, no. 7, pp. 959-964.

58817 Joshua, DE 2005, 'Multiple myeloma: the present and the future, *Medical Journal of Australia*, vol. 183, no. 7, p. 344.

26894 Joshua, DE Gibson, J 2000, 'Multiple myeloma--evolving concepts of biology and treatment', *Australian and New Zealand Journal of Medicine*, vol. 30, no. 3, pp. 311-318.

27609 Joy Ho, P 2002, 'Chromosomal and genetic abnormalities in myeloma', *Clinical & Laboratory Haemotology*, vol. 24, no. 5, pp. 259-269.

15333 Jyothirmayi, R et al. 1997, 'Radiotherapy in the treatment of solitary plasmacytoma', *The British Journal of Radiology*, vol. 70, pp. 511-516.

27793 Kabbur, MB et al. 2001, 'Effect of JP-8 jet fuel on molecular and histological parameters related to acute skin irritation', *Toxicology & Applied Pharmacology*, vol. 175, pp. 83-88.

14495 Kagan, E Jacobson, RJ 1983, 'Lymphoid and plasma cell malignancies: asbestos-related disorders of long latency', *American Journal of Clinical Pathology*, vol. 80, 1, pp. 14-20.

27424 Kaloterakis, A et al. 2001, 'Multiple myeloma in sickle cell syndromes', *Haematologia*, vol. 31, no. 2, pp. 153-159.

50306 Kang, D et al. 2008, 'Cancer incidence among male Massachusetts firefighters, 1987-2003', *American Journal of Industrial Medicine*, vol. 51, pp. 329-335.

27800 Kanikkannan, N et al. 2001, 'Percutaneous absorption and skin irritation of JP-8 jet fuel', *Toxicology*, vol. 161, pp. 1-11.

15325 Kaplan, SD 1986, 'Update of a mortality study of workers in petroleum refineries', *Journal of Occupational Medicine*, vol. 28, no. 7, pp. 514-516.

63139 Karlson, EW et al. 2001, 'Monoclonal gammopathy of undetermined significance and exposure to breast implants', *Archives of Internal Medicine* , vol. 161, pp. 864-867.

27207 Kastrinakis, NG et al. 2000, 'Molecular aspects of multiple myeloma', *Annals of Oncology*, vol. 11, no. 10, pp. 1217-1228.

20247 Katariya, K Thurer, RJ 1999, 'Malignancies associated with the immunocompromised state', *Chest Surgery Clinics of North America*, vol. 9, no. 1, pp. 63-77.

62065 Katzmann, JA et al. 2005, 'Diagnostic performance of quantitative kappa and lambda free light chain assays in clinical practice', *Clinical Chemistry*, vol. 51, no. 5, pp. 878-881.

26841 Kaufmann, H et al. 2001, 'Absence of clonal chromosomal relationship between concomitant B-CLL and multiple myeloma--a report on two cases', *Annals of Hematology*, vol. 80, no. 8, pp. 474-478.

16601 Kayajanian, GM 1999, 'Commentary: a critical review. Dioxin is a systemic promoter blocker, II', *Ecotoxicology and Environmental Safety*, vol. 42, pp. 103-109.

65059 Kaye, JA Jick, H 2005, 'Antibiotics and the risk of breast cancer', *Epidemiology*, vol. 16, no. 5, pp. 688-709.

15719 Kelsh, MA Sahl, JD 1997, 'Mortality among a cohort of electric utility workers, 1960-1991', *Journal of Industrial Medicine*, vol. 131, pp. 534-44.

16739 Ketchum, NS et al. 1999, 'Serum dioxin and cancer in veterans of operation ranch hand', *American Journal of Epidemiology*, vol. 149, no. 7, pp. 630-639. **Comms**

65053 Khan, MM et al. 2006, 'Risk factors for multiple myeloma: evidence from the Japan collaborative cohort, JACC Study', *Asian Pacific Journal of Cancer Prevention*, vol. 7, pp. 575-581.

27209 Khanna, D 2002, 'Eosinophilic fasciitis with multiple myeloma: a new haematological association', Annals of the Rehumatic Diseases, vol. 61, no. 12, pp. 1111-1112.

23783 Kheifets, LI et al. 2001, 'Electric and magnetic fields and cancer: case study', *American Journal of Epidemiology*, vol. 154, no. 12, pp. S50-S59.

12955 13141 Khuder, SA Mutgi, AB 1997, 'Meta-analyses of multiple myeloma and farming', *American Journal of Industrial Medicine*, vol. 32, pp. 510-516.

54759 Kirkeleit, J et al. 2008, 'Increased risk of acute myelogenous leukemia and multiple myeloma in a historical cohort of upstream petroleum workers exposed to crude oil', *Cancer Causes & Control*, vol. 19, pp. 13-23.

48052 Knight, R et al. 2006, [COMENT] 'Lenalidomide and venous thrombosis in multiple myeloma', *New England Journal of Medicine*, vol. 354, no. 19, pp. 2079-2080.

61728 Knopper, LD Lean, DR 2004, 'Carcinogenic and genotoxic potential of turf pesticides commonly used on golf courses', *Journal of Toxicology and Environmental Health*, vol. 7, pp. 267-279.

24669 Knutsson, A et al. 2000, 'Cancers in concrete workers: results of a cohort study of 33,668 workers', *Occupational and Environmental Medicine*, vol. 57, no. 4, pp. 264-267.

4611 Koepsell, TD et al. 1987, 'Antigenic stimulation and the occurrence of multiple myeloma', *American Journal of Epidemiology*, vol. 126, no. 6, pp. 1051-1062.

15359 Koessel, SL et al. 1996, 'Socioeconomic status and the incidence of multiple myeloma', *Epidemiology*, vol. 7, no. 1, pp. 4-8.

15940 Kogevinas, M et al. 1998, 'Cancer risk in the rubber industry: a review of the recent epidemiological evidence', *Occupational and Environmental Medicine*, vol. 55, no. 1, pp. 1-12.

26893 Konigsbert, R et al. 1999, 'The nature of the cell in multiple myeloma', *American Journal of Pathology*, vol. 155, no. 3, pp. 1005-1007.

4599 Koranda, FC 1981, 'Antimalarials', *Journal of the American Academy of Dermatology*, vol. 4, no. 6, pp. 650-655.

62070 Kose, KC et al. 2006, 'Functional results of vertebral augmentation techniques in pathological vertebral factures of myelomatous patients', *Journal of the National Medical Association*, vol. 98, no. 10, pp. 1654-1658.

17943 Kosmas, C et al. 1996, [ABSTRACT] 'Analysis of the kappa light chain variable region in multiple myeloma', *British Journal of Harmatology*, vol. 94, no. 2, pp. 306-317.

63851 Koutros, S et al. 2008, 'Dichlorvos exposure and human cancer risk: results from the Agricultural Health Study', *Cancer Causes & Control*, vol. 9, no. 1, p. 59.

58802 Koutros, S et al. 2009, 'Heterocyclic aromatic amine pesticide use and human cancer risk: results from the U.S. Agricultural Health Study', *International Journal of Cancer*, vol. 124, pp. 1206-1212.

65055 Koutros, S et al. 2009, 'Use of hair coloring products and risk of multiple myeloma among U.S. women', *Occupational and Environmental Medicine*, vol. 66, no. 1, pp. 68-70.

63466 Koutros, S et al. 2010, 'An update of cancer incidence in the Agricultural Health Study', *Journal of Occupational and Environmental Medicine*, vol. 52, no. 11, pp. 1098-1105. **Comms**

23906 Krewski, D et al. 2001, 'Potential health risks of radiofrequency fields from wireless telecommunication devices', *Journal of Toxicology & Environmental Health, Part B, Critical Reviews*, vol. 4, no. 1, pp. 1-143.

25130 Krewski, D et al. 2001, 'Recent advances in research on radiofrequency fields and health', *Journal of Toxicology & Environmental Health, Part B, Critical Reviews*, vol. 4, no. 1, pp. 145-159.

45581 Krewski, D et al. 2007, 'Recent advances in research on radiofrequency fields and health: 2001-2003', *Journal of Toxicology and Environmental Health, Part B*, vol. 10, pp. 287-318.

15301 Kristensen, P et al. 1996, 'Incidence and risk factors of cancer among men and women in Norwegian agriculture', *Scandinavian Journal of Work, Environment & Health*, vol. 22, pp. 14-26.

61731 Kross, BC et al. 199, [COMMENT] 'Re: Proportionate mortality study of golf course superintendents', *American Journal of Industrial Medicine*, vol. 32, p. 99, comment on ID: 56146.

56146 Kross, BC et al. 1996, 'Proportionate mortality study of golf course superintendents', *American Journal of Industrial Medicine*, vol. 29, pp. 501-506.

60466 Kubale, T et al. 2008, 'A cohort mortality study of chemical laboratory workers at department of energy nuclear plants', *American Journal of Industrial Medicine*, vol. 51, pp. 656-667.

27341 Kuehl, WM Bergsagel, PL. 2002, 'Multiple myeloma: evolving genetic events and host interactions', *Nature Reviews Cancer*, vol. 2, no. 3, pp. 175-187.

26836 Kumar, A 2002, 'Occurrence of multiple myeloma in both donor and recipient after bone marrow transplantation', *American Journal of Hematology*, vol. 71, no. 3, pp. 227-228.

4604 Kumar, S et al. 1994, 'Hematopathology - Plasma cell myeloma in patients who are HIV-positive', *American Journal of Clinical Pathology*, vol. 102, no. 5, pp. 633-639.

26833 Kumar, S et al. 2003, 'Response rate, durability of response, and survival after thalidomide therapy for relapsed multiple myeloma', *Mayo Clinical Proceedings*, vol. 78, no. 1, pp. 34-39.

27649 Kyle, RA 1975, 'Multiple Myeloma. Review of 869 cases', *Mayo Clinical Proceedings*, vol. 50, no. 1, pp. 29-40.

4609 Kyle, RA 1994, 'Monoclonal gammopathy of undetermined significance', *Blood Reviews*, vol. 8, no. 3, pp. 135-141.

15302 Kyle, RA 1996, 'Monoclonal gammopathy of undetermined significance', *Current Topics in Microbiology & Immunology*, vol. 210, pp. 375-383.

40133 Kyle, RA et al. 2002, 'A long-term study of prognosis in monoclonal gammopathy of undetermined significance', *New England Journal of Medicine*, vol. 346, no 8, pp. 564-569.

26832 Kyle, RA et al. 2003, 'Review of 1027 patients with newly diagnosed multiple myeloma', *Mayo Clinical Proceedings*, col. 78, no. 1, pp. 21-33.

63208 Kyle, RA et al. 2010, 'Monoclonal gammopathy of undetermined significance (MGUS) and smoldering asymptomatic) multiple myeloma: IMWG consensus perspectives risk factors for progression and guidelines for monitoring and management', *Leukemia*, vol. 24, pp. 1121-1127.

60467 Kyle, RA Rajkumar, SV 2007, 'Epidemiology of the plasma-cell disorders', *Best Practice & Research Clinical Haematology*, vol. 20, no. 4, pp. 637-664.

60976 Kyle, RA Rajkumar, SV 2007, 'Monoclonal gammopathy of undetermined significance and smoldering multiple myeloma: emphasis on risk factors for progression', *British Journal of Haematology*, vol. 139, pp. 730-743.

60962 Kyle, RA Rajkumar, SV 2008, 'Multiple myeloma', *Blood*, vol. 111, no. 6, pp. 2962-2972.

12970 La Vecchia, C et al. 1989, 'Occupation and lymphoid neoplasms', *British Journal of Cancer*, vol. 60, pp. 385-388.

63152 LaCasce, AS 2006, 'Post-transplant lymphoproliferative disorders', *The Oncologist*, vol. 11, pp. 674-680.

62071 Lacy, MQ et al. 2006, 'Mayo clinic consensus statement for the use of bisphosphonates in multiple myeloma', *Mayo Clinical Proceedings*, vol. 81, no. 8, pp. 1047-1053.

25387 Lagorio, S et al. 1997, 'Mortality of plastic-ware workers exposed to radiofrequencies', *Bioelectromagnetics*, vol. 18, pp. 418-421.

26180 Lamba, AB et al. 2001, 'Cancer mortality patterns among hairdressers and barbers in 24 US states, 1984 to 1995', *Journal of Occupational and Environmental Medicine*, vol. 43, no. 3, pp. 250-258.

26853 Lamboley, V et al. 2002, 'Myeloma and monoclonal gammopathy of uncertain significance associated with acquired von Willebrand's syndrome. Seven new cases with a literature review', *Joint Bone Spine*, vol. 69, no. 1, pp. 62-67.

63205 Landgren, O 2009, 'A role for ionizing radiation in myelomagenesis', *Blood*, vol. 113, no. 8, pp. 616-617.

60966 Landgren, O 2010, 'Monoclonal gammopathy of undetermined significance and smoldering myeloma: new insights into pathophysiology and epidemiology', *Hematology*, vol. 295-302.

62067 Landgren, O et al. 2009, 'Monoclonal gammopathy of undetermined significance, consistently precedes multiple myeloma: a prospective study', *Blood*, vol. 113, pp. 5412-5417.

58798 58816 Landgren, O et al. 2009, 'Pesticide exposure and risk of monoclonal gammopathy of undetermined significance in the Agricultural Health Study', *Blood*, vol. 113, no. 25, pp. 6386-6391.

65056 Landgren, O et al. 2010, 'Obesity is associated with an increased risk of monoclonal gammopathy of undetermined significance among black and white women', *Blood*, vol. 116, no. 7, pp. 1056-1059.

60977 Landgren, O Kyle, RA 2007, 'Multiple myeloma, chronic lymphocytic leukaemia and associated precursor diseases', *British Journal of Haematology*, vol. 139, pp. 717-723.

16954 Lanes, SF et al. 1994, 'Mortality among synthetic fiber workers exposed to glycerol polyglycidyl ether', *American Journal of Industrial Medicine*, vol. 25, no. 5, pp. 689-696.

60975 Larsson, SC Wolk, A 2007, 'Body mass index and risk of multiple myeloma: a meta-analysis', *International Journal of Cancer*, vol. 121, pp. 2512-2516.

17385 Laso, FJ et al. 1998, 'Extramedullary plasmacytoma: a localized or systemic disease?', *Annals of Internal Medicine*, vol. 128, no. 2, p. 156.

61047 Laubach, J et al. 2011, 'Multiple myeloma', *Annual Review of Medicine*, vol. 62, pp. 249-264.

27604 Lee, E et al. 2002, 'Proportionate mortality of crop and livestock farmers in the United States, 1984-1993', *American Journal of Industrial Medicine*, vol. 42, no. 5, pp. 410-420.

40135 Lee, WJ et al. 2003, 'Multiple myeloma and diesel and other occupational exposure in Swedish construction workers', *International Journal of Cancer*, vol. 107, pp. 134-138.

63461 Lee, WJ et al. 2007, 'Pesticide use and colorectal cancer risk in the Agricultural Health Study', *International Journal of Cancer*, vol. 121, no. 2, pp. 339-346.

50628 LeMasters, GK 2006, 'Cancer risk among firefighters: a review and meta-analysis of 32 studies', *Journal of Occupational & Environmental Medicine*, vol. 48, no. 11, pp. 1189-1202.

13892 Levi, F et al. 1997, 'Incidence of invasive cancers following squamous cell skin cancer', *American Journal of Epidemiology*, vol. 146, no, 9, pp. 734-739.

27822 Levine, AM et al. 2001, 'Hematological aspects of HIV/AIDS', *Hematology*, pp. 463-478.

4568 Lewis, DR et al. 1994, 'Multiple myeloma among blacks and whites in United States: the role of chronic antigenic stimulation', *Cancer Causes & Control*, vol. 5, pp. 529-539.

26863 Lewis, RJ et al. 2000, 'Updated mortality among diverse operating segments of a petroleum company', *Occupational and Environmental Medicine*, vol. 57, no. 9, pp. 595-604.

28390 Lichtenstein, P et al. 2000, 'Potential and heritable factors in the causation of cancer-analyses of cohorts of twins from Sweden, Denmark, and Finland', *New England Journal of Medicine*, vol. 343, no. 2, pp. 78-85.

60965 Lichtman, MA 2010, 'Obesity and the risk for a hematological malignancy: leukemia, lymphoma or myeloma', *The Oncologist*, vol. 15, pp. 1083-101.

16941 Lickiss, JN et al. 1977, 'Lymphoproliferative and myeloproliferative disease in Tasmania', *National Cancer Institute Monographs*, vol. 47, pp. 37-39.

15330 Liebross, RH et al. 1998, 'Solitary bone plasmacytoma: outcome and prognostic factors following radiotherapy', *International Journal of Radiation Oncology Biology Physics*, vol. 41, no. 5, pp. 1063-1067.

64417 Lim, U et al. 2006, 'Dietary factors of one-carbon metabolism in relation to non-Hodgkin lymphoma and multiple myeloma in a cohort of male smokers', *Cancer Epidemiology, Biomarkers & Prevention*, vol. 15, no. 6, pp. 1109-1114.

62553 Lincz, LF et al. 2004, 'Xenobiotic gene polymorphisms and susceptibility to multiple myeloma', *Haematologica*, vol. 89, no. 5, pp. 628-629.

62554 Lincz, LF et al. 2007, 'Genetic variations in benzene metabolism and susceptibility to multiple myeloma', *Leukemia Research*, vol. 31, pp. 759-763.

4484 Lindquist, R et al. 1987, 'Increased risk of developing acute leukemia after employment as a painter', *Cancer*, vol. 60, pp. 1378-1384.

13978 Lindsay, JP 1993, 'The Canadian labour force ten percent sample study. Cancer mortality among men, 1965-1979', *Journal of Occupational Medicine*, vol. 35, 4, pp. 408-414.

4610 Linet, MS et al. 1987, 'A case-control study of multiple myeloma in whites: Chronic Antigenic stimulation, occupation and drug use', *Cancer Research*, vol. 27, pp. 2978-2981.

1592 Linet, MS et al. 1994, 'Occupation and hematopoietic and lymphoproliferative malignancies among women: a linked registry study', *Journal of Medicine*, vol. 36, no. 11, pp. 1187-1198.

52979 Lipworth, L et al. 2009, 'Cancer among Scandinavian women with cosmetic breast implants: A pooled long-term follow-up study', *International Journal of Cancer*, vol. 124, pp. 490-493.

64376 Lipworth, L et al. 2011, 'Cancer mortality among aircraft manufacturing workers. An extended follow-up', *Journal of Occupational & Environmental Medicine*, vol. 53, no. 9, pp. 992-1007.

11080 Little, MP Muirhead, CR 1996, 'Evidence for curvilinearity in the cancer incidence dose - response in the Japanese atomic bomb survivors', *International Journal of Radiation Biology*, vol. 70, no. 1, pp. 83-94.

26559 Litvak, E et al. 2002, 'Health and safety implications of exposure to electromagnetic fields in the frequency range 300 Hz to 10 MHz', *Bioelectromagnetics*, vol. 23, no. 1,pp. 68-82.

4562 Lloyd, RD Taylor, GN 1991, [COMMENT] 'NTS Fallout-induced multiple myeloma in Utah', *Health Physics*, vol. 61, no. 5, pp. 671-674.

23042 Longo, DL 1998, *Plasma cell disorders*. Harrison's Principles of Internal Medicine 14th edn chap. 144, pp. 712-713, Fauci, AS et al. (eds). McGraw-Hill New York.

57352 Lope, V et al. 2008, 'Occupation, exposure to chemicals, sensitizing agents, and risk of multiple myeloma in Sweden', *Cancer Epidemiology, Biomarkers & Prevention*, vol. 17, no. 11, pp. 3123-3127.

45580 Lowenthal, RM et al. 2007, 'Residential exposure to electric power transmission lines and risk of lymphoproliferative and myeloproliferative disorders: a case-control study', *Internal Medicine Journal*, vol. 37, pp. 614-619.

7007 Lundberg, I 1986, 'Mortality and cancer incidence among Swedish paint industry workers with long-term exposure to organic solvents', *Scandinavian Journal of Work, Environment and Health*, vol. 12, pp. 108-113.

14817 26083 Lundberg, I Milatou-Smith, R 1998, 'Mortality and cancer incidence among Swedish paint industry workers with long-term exposure to organic solvents', *Scandinavian Journal of Work, Environment and Health*, vol. 24, no. 4, pp. 270-275.

26887 Lynch, HT et al. 2001, 'Familial multiple myeloma: a family study and review of the literature', *Journal of the National Cancer Institute*, vol. 93, 19, pp. 1479-1483.

58799 Lynch, SM et al. 2009, 'Cancer incidence among pesticide applicators exposed to butylate in the Agricultural Health Study', *Environmental Research*, vol. 109, pp. 860-868.

17285 Lynge, E 1998, 'Cancer incidence in Danish phenoxy herbicide workers, 1947-1993', *Environmental Health Perspectives*, vol. 106, suppl. 2, pp. 683-688. **Comms**

13222 Lynge, E et al. 1997, 'Organic solvents and cancer', *Cancer Causes & Control*, vol. 8, no. 3, pp. 406-419.

10920 Lynge, E et al. 1997, 'Risk of cancer and exposure to gasoline vapors', *American Journal of Epidemiology*, vol. 145, no. 5, pp. 449-458.

42462 Lynge, E et al. 2006, 'Cancer in persons working in dry cleaning in the Nordic countries', *Environmental Health Perspectives*, vol. 114, no. 2, pp. 213-219.

56151 Macfarlane, E et al. 2010, 'Causes of death and incidence of cancer in a cohort of Australian pesticide-exposed workers', *Annals of Epidemiology*, vol. 20, pp. 273-280.

15309 Mackenzie, J et al. 1997, 'HHV-8 and multiple myeloma in the UK', *The Lancet*, vol. 350, no. 9085, pp. 1144-1145.

65063 Mahajan, R et al. 2006, 'Fonofos exposure and cancer incidence in the agricultural health study', *Environmental Health Perspectives*, vol. 114, no. 12, pp. 1838-1842.

65054 Mahajan, R et al. 2006, 'Phorate exposure and incidence of cancer in the agricultural health study', *Environmental Health Perspectives*, vol. 114, no. 8, pp. 1205-1209.

45752 Mahajan, R et al. 2007, 'Carbaryl exposure and incident cancer in the Agricultural Health Study', *International Journal of Cancer*, vol. 121, pp. 1799-1805.

5125 Marsh, GM et al. 1991, 'Mortality patterns among petroleum refinery and chemical plant workers', *American Journal of Industrial Medicine*, vol. 19, no. 1, pp. 29-42.

24597 Marsh, GM et al. 1999, 'Mortality among chemical plant workers exposed to acrylonitrile and other substances', *American Journal of Industrial Medicine*, vol. 36, no. 4, pp. 423-436.

17947 Martyn, CN Hughes, RAC 1997, [ABSTRACT] 'Epidemiology of peripheral neuropathy', *Journal of Neurology, Neurosurgery & Psychiatry*, vol. 62, no. 4, pp. 310-318.

13049 Massoudi, BL et al. 1997, 'A case-control study of hematopoietic and lymphoid neoplasms: the role of work in the chemical industry', *American Journal of Industrial Medicine*, vol. 31, no. 1, pp. 21-27.

15690 Mastrangelo, G et al. 1996, 'Polycyclic aromatic hydrocarbons and cancer in man', *Environmental Health Perspectives*, vol. 104, no. 11, pp. 1166-1170.

15434 Matanoski, G et al. 1986, 'A cohort mortality study of painters and allied tradesmen', *Scandinavian Journal of Work, Environment & Health*, vol. 12, pp. 16-21.

13048 Matanoski, G et al. 1997, 'Lymphomatopoietic cancers and butadiene and styrene exposure in synthetic rubber manufacture', *Annals of the New York Academy of Sciences*, vol. 837, pp. 157-169.

56055 McBride, DI et al. 2009, 'Mortality in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin at a trichlorophenol plant in New Zealand', *Journal of Occupational & Environmental Medicine*, vol. 51, no. 9, pp. 1049-1056. **Comms**

22080 McGeoghegan, D Binks, K. 2000, 'The mortality and cancer morbidity experience of workers at the Springfields uranium production facility, 1946-95', *Journal of Radiodiological Protection*, vol. 20, pp. 111-137.

4551 McIntyre, OR undated, 'Myeloma', *Part Two Specific Neoplasms*, pp. 433-435, 452-457.

16742 McLaughlin JK et al. 1988, 'Multiple myeloma and occupation in Sweden', *Archives of Environmental Health*, vol. 43, no. 1, pp. 7-10.

52290 McLaughlin JK et al. 2006, 'Long-term cancer risk among Swedish women with cosmetic breast implants: an update of a nationwide study', *Journal of the National Cancer Institute*, vol. 98, no. 8, pp. 557-560.

28386 McLaughlin, JK 2002, 'The need for population-based epidemiology studies in the United States', *Journal of long-term Effects of Medical Implants* vol. 12, no. 4, pp. 251-253.

63759 Mendelsohn, JB et al. 2009, 'Personal use of hair dye and cancer risk in a prospective cohort of Chinese women', *Cancer Science*, vol. 100, no. 6, pp. 1088-1091.

50636 Merhi, M et al. 2007, 'Occupational exposure to pesticides and risk of hematopoietic cancers: meta-analysis of case-control studies', *Cancer Causes & Control*, vol. 18, pp. 1209-1226.

50724 Merrill, RM et al. 2007, 'The association between allergies and cancer: what is currently known?', *Annals of Allergy, Asthma & Immunology*, vol. 99, pp. 102-116.

47612 Mester, B et al. 2006, 'Occupational and malignant lymphoma: a population based case control study in Germany', *Occupational and Environmental Medicine*, vol. 63, no. 1, pp. 17-26.

62402 Mihou, D et al. 2006, 'Evaluation of five staging systems in 470 patients with multiple myeloma', *Haematologica*, vol. 91, no. 8, pp. 1149-1150.

15489 Mikkelsen, S. 1980, 'A cohort study of disability pension and death among painters with special regard to disabling presenile dementia as an occupational disease', *Scandinavian Journal of Social Medicine*, suppl. 16, pp. 34-43.

16967 Milham, S 1971, 'Leukemia and multiple myeloma in farmers', *American Journal of Epidemiology*, vol. 94, pp. 307-310.

14619 Milham, S Jr 1988, [COMMENT] 'Mortality by license class in amateur radio operators', *American Journal of Epidemiology*, pp. 1175-1176.

26156 Miligi, L et al. 1999, 'Occupational, environmental, and life-style factors associated with the risk of hematolymphopoietic malignancies in women', *American Journal of Industrial Medicine*, vol. 36, no. 1, pp. 60-69.

50637 Miligi, L et al. 2006, 'Cancer and pesticides. An overview and some results of the Italian Multicenter Case-Control Study on Hematolymphopoietic Malignancies', *Annals of the New York Acadamey of Scicences*, vol. 1076, pp. 366-377.

21153 Miller, AB et al. 1996, 'Leukemia following occupational exposure to 60-Hz electric and magnetic fields among Ontario electric utility workers', *American Journal of Epidemiology*, vol. 144, pp. 150-160.

38743 Mills, PK et al. 2005, 'Lymphohematopoietic cancers in the United Farm Workers of America 1988-2001', *Cancer Causes & Control*, vol. 16, pp. 823-830.

27208 27279 Minami, A et al. 1999, 'Two cases of inflammatory bowel disease with multiple myeloma', *Journal of Gastroenterology*, vol. 34, no. 5, pp. 629-633.

26897 Mitterer, M et al. 1999, 'The relationship between monoclonal myeloma precursor B cells in the peripheral blood stem cell harvests and the clinical response of multiple myeloma patients', *British Journal of Haematology*, vol. 106, pp. 737-743.

64421 Monnereau, A et al. 2008, 'Cigarette smoking, alcohol drinking, and risk of lymphoid neoplasms: results of a French case-control study', *Cancer Causes Control*, vol. 19, pp. 1147-1160.

27796 Monteiro-Riviere, N et al. 2001, 'Effects of short-term high-dose and low-dose dermal exposure to Jet A, JP-8 and JP-8+100 jet fuels', *Journal of Applied Toxicology*, vol. 21, pp. 485-494.

27127 Montella, M et al. 2000, 'Hepatitis C virus infection and new association with extrahepatic disease: multiple myeloma', *Haematologica*, vol. 85, no. 8, pp. 883-884.

26851 Montella, M et al. 2001, 'HCV and cancer: a case-control study in a high-endemic area', *Liver* , vol. 21, no. 5, pp. 335-341.

26845 Montella, M et al. 2001, 'HCV and tumors correlated with immune system: a case-control study in an area of hyperendemicity', *Leukemia Research*, vol. 25, no. 9, pp. 775-781.

27601 Morgan, GJ et al. 2002, 'Myeloma aetiology and epidemiology', *Biomedicine & Pharmacotherapy*, vol. 56, no. 5, pp. 223-234.

15419 Morgan, RW et al. 1981, 'A general mortality study of production workers in the paint and coatings manufacturing industry. A preliminary report', *Journal of Occupational Medicine*, vol. 23, no. 1, pp. 13-21.

14768 Morgan, RW et al. 1998, 'Mortality of aerospace workers exposed to trichloroethylene', *Epidemiology*, vol. 9, no. 4, pp. 424-431, ERRATUM: 2000, *Epidemiology*, vol. 11, no. 3, p. 360.

24970 Morgan, RW et al. 2000, 'Radiofrequency exposure and mortality from cancer of the brain and lymphatic/hematopoietic systems', *Epidemiology*, vol. 11, pp. 118-127.

4483 Morris, PD et al. 1986, 'Toxic substance exposure and multiple myeloma: A case-control study', *Journal of the National Cancer Institute*, vol. 76, no. 6, pp. 987-994.

4552 Morrison, HI et al. 1992, 'Review - Herbicides and Cancer', *Journal of the National Cancer Institute*, vol. 84, no. 24, pp. 1866-1874.

23853 Moulder ,JE et al. 1999, 'Malyapa RS, Merritt J, Pickard WF Vijayalaxmi (1999) Cell phones and cancer: what is the evidence for a connection?', *Radiation Research*, vol. 151, no. 5, pp. 513-531.

17201 Muirhead, CR et al. 1999, 'Occupational radiation exposure and mortality: second analysis of the National Registry for radiation workers', Journal of Radiological Protection, vol. 19, no. 1, pp. 3-26.

27624 Muirhead, CR et al. 2003, 'Follow up of mortality and incidence of cancer 1952-98 in men from the UK who participated in the UK's atmospheric nuclear weapons tests and experimental programmes', *Occupational and Environmental Medicine*, vol. 60, no. 3, pp. 165-172.

64492 Mundt, KA et al. 1999, 'An occupational cohort mortality study of women in the German rubber industry: 1976 to 1991', *Journal of Occupational and Environmental Medicine*, vol. 41, no. 9, pp. 807-812.

26579 Munker, R et al. 1999, 'Second malignancies after Hodgkin's disease: the Munich experience', *Annals of Hematology*, vol. 78, no. 12, pp. 544-554.

27230 Murthy, GL 1999, 'Malignancy in rheumatoid arthritis--a report of two cases', *Journal of Association of Physicians India*, vol. 47, no. 5, pp. 544-545.

15306 Mussini, C et al. 1995, 'Monoclonal gammopathies and hepatitis C virus infection', *Blood*, vol. 85, pp. 1144-1145.

1302 Namboodiri, KK Harris, RE 1991, 'Hematopoietic and lymphoproliferative cancer among male veterans using the Veterans Administration Medical System', *Cancer*, vol. 68, no. 5, pp. 1123-1130.

15913 Nandakumar, A et al. 1986, 'Multiple myeloma in Western Australia: a case-control study in relation to occupation, father's occupation, socioeconomic status and country of birth', *International Journal of Cancer*, vol. 37, pp. 223-226.

15362 Nanni, O et al. 1998, 'Multiple myeloma and work in agriculture: results of a case-control study in Forli, Italy', *Cancer Causes & Control*, vol. 9, no. 3, pp. 277-283.

28388 National Academy of Sciences 2003, *Insecticides and Solvents. Gulf War and Health*, vol. 2, pp. 111-112, 144-147, 327-328, 335-338, 347-351, National Academy Press, Washington, DC.

17942 National Cancer Institute 1999, Plasma cell neoplasm: General information http://cancernet.nci.nih.gov/clinpdq/soa/Pasma_cel_neoplasm_Physician.htm

26174 National Radiological Protection Board 2001, *ELF electromagnetic fields and the risk of cancer*, Report of the Advisory Group on Non-ionising Radiation, Doc NRPB, vol. 12, no. 1, pp. 103, 108-109, 122-165, full publication held in RMA Library at Cat. No. D37.

23798 National Radiological Protection Board 2001, *ELF electromagnetic fields and the risk of cancer*, Report of the Advisory Group on Non-ionising Radiation, Doc NRPB, 12, no. 1, pp. 6-7.

28736 National Research Centre for Environmental Toxicology undated, *Examination of the potential exposure of Royal Australian Navy (RAN) personnel to polychlorinated dibenzodioxins and polychlorinated dibenzofurans via drinking water*, A report to the Dept Of Veteran Affairs, Australia

63455 National Toxicology Program, Department of Health and Human Services 2011, *Styrene. Report on Carcinogens*, 12th edn. p. 383.

63456 National Toxicology Program, Department of Health and Human Services 2011, *Tetrachloroethylene. Report on Carcinogens*, 12th edn. p. 398.

63457 National Toxicology Program, Department of Health and Human Services 2011, *Trichloroethylene. Report on Carcinogens*, 12th edn. p. 420.

63570 Neasham, D et al. 2011, 'Occupation and risk of lymphoma: a multicentre prospective cohort study', *Occupational and Environmental Medicine*, vol. 68, pp. 77-81.

61727 Nebert, D 2005, 'Inter-individual susceptibility to environmental toxicants-a current assessment', *Toxicology and Applied Pharmacology*, vol. 207, pp. 34-42.

62391 Neriishi, K et al. 2003, 'Monoclonal gammopathy of undetermined significance in atomic bomb survivors: incidence and transformation to multiple myeloma', *British Journal of Haematology*, vol. 121, pp. 405-410.

50648 Nieters, A et al. 2006, 'Tobacco and alcohol consumption and risk of lymphoma: results of a population-based case-control study in Germany', *International Journal of Cancer*, vol. 118, pp. 422-30.

52297 Nieters, A et al. 2008, 'Smoking and lymphoma risk in the European prospective investigation into cancer and nutrition', *American Journal of Epidemiology*, vol. 167, no. 9, pp. 1081-1089.

15327 Nilsson, RI et al. 1998, 'Leukaemia, lymphoma, and multiple myeloma in seaman on tankers', *Occupational and Environmental Medicine*, vol. 55, pp. 517-521.

26858 Nilsson, RI et al. 2002, 'Cytogenetic features of multiple myeloma: impact of gender, age, disease phase, culture time, and cytokine stimulation', *European Journal of Haematology*, vol. 68, no. 6, pp. 345-353.

60968 Ninan, MJ Datta, YH 2010, 'Post-transplant lymphoproliferative disorder presenting as multiple myeloma', *American Journal of Hematology*, vol. 85, no. 8, pp. 635-637.

58801 Oliver, J et al. 2009, 'Occupational exposure to metribuzin and the incidence of cancer in the Agricultural Health Study', *Annals of Epidemiology*, vol. 19, pp. 388-395.

15435 Olsen, JH Jensen, OM 1987, 'Occupation and risk of cancer in Denmark. An analysis of 93 810 cancer cases, 1970-1979', *Scandinavian Journal of Work, Environment & Health*, vol. 13, suppl.1, pp. 1-91.

15938 Omar, RZ et al. 1999, 'Cancer mortality and morbidity among plutonium workers at the sellafield plant of British nuclear fuels', *British Journal of Cancer*, vol. 79, no. 7-8, pp. 1288-1301.

4603 Ong, F et al. 1995, 'Is the Durie and Salmon diagnostic classification system for plasma cells dyscrasias still the best choice?', *Annals of Hematology*, vol. 70, pp. 19-24.

50662 Orsi, L et al. 2007, 'Occupation and lymphoid malignancies: results from a French case-control study', *Journal of Occupational & Environmental Medicine*, vol. 49, no. 12, pp. 1339-1350.

62271 Orsi, L et al. 2009, 'Occupational exposure to pesticides and lymphoid neoplasms among men: results of a French case-control study', *Occupational and Environmental Medicine*, vol. 66, no. 5, pp. 291-298. **Comms**

60468 Orsi, L et al. 2010, 'Occupational exposure to organic solvents and lymphoid neoplasms in men: results of a French case-control study', *Occupational and Environmental Medicine*, vol. 67, pp. 664-672.

15323 Ott, MG et al. 1985, 'Mortality among employees engaged in chemical manufacturing and related activities', *American Journal of Epidemiology*, vol. 122, no. 2, pp. 311-322.

3068 Ott, MG et al. 1989, 'Lymphatic and hematopoietic tissue cancer in a chemical manufacturing environment', *American Journal of Industrial Medicine*, vol. 16, pp. 631-643.

24971 Owen, RD 2000, 'Possible health risks of radiofrequency exposure from mobile telephones', *Epidemiology*, vol. 11, no. 2, pp. 99-100.

15384 Ozkalemkas, F et al. 1996, 'Multiple myeloma in the region of Bursa, Turkey: a retrospective analysis', *Journal of Environmental Pathology, Toxicology & Oncology*, vol. 15, no. 2-4, pp. 267-270.

26929 Paavolaineen, P et al. 1999, 'Cancer incidence after total knee arthroplasty. A nationwide Finnish cohort from 1980 to 1996 involving 9,444 patients', *Acta Orthopaedica Scandinavica*; vol. 70, no. 6, pp. 609-617.

35010 Pahwa, P et al. 2003, 'Exposure to animals and selected risk factors among Canadian farm residents with Hodgkin's disease, multiple myeloma, or soft tissue sarcoma', *Journal of Occupational & Environmental Medicine*, vol. 45, no. 8, pp. 857-868.

62390 Pahwa, P et al. 2006, 'Hodgkin lymphoma, multiple myeloma, soft tissue sarcomas, insect repellents, and phenoxyherbicides', *Journal of Occupational & Environmental Medicine*, vol. 48, pp. 264-274. **Comms**

63194 Pahwa, P et al. 2012, 'Multiple myeloma and exposure to pesticides: A Canadian case-control study', *Journal of Agromedicine*, vol. 17, pp. 40-50. **Comms**

61045 Pan, SY Morrison, H 2011, 'Physical activity and hematologic cancer prevention', *Recent Results in Cancer Research*, vol. 186, pp. 135-158.

27282 Pandit, S Vesole, DH 2002, 'Multiple myeloma: role of allogeneic transplantation', *Oncology*, vol. 16, no. 9, pp. 1268-74, discussion 1274-1276.

62928 Pantanowitz, L Dezube, BJ 2011, 'Thalidomide-based treatment for HIV - associated multiple myeloma, accessed http://www.medscape.com/viewarticle/460735

58804 Park, SK et al. 2009, 'Cancer incidence among paraquat exposed applicators in the Agricultural Health Study. Prospective cohort study', *International Journal of Occupational Medicine & Environmental Health*, vol. Environmental Health, 15: 274-281.

6662 Parsonnet, J et al. 1994, 'Helicobacter pylori infection and gastric lymphoma', *New England Journal of Medicine*, vol. 330, no. 18, pp. 1267-1271.

17265 Pasqualetti, P et al. 1996, 'Risk of monoclonal gammopathy of undetermined significance: a case-referent study', *American Journal of Hematology*, vol. 52, 3, pp. 217-220.

13084 Paxton, MB 1996, 'Leukemia risk associated with benzene exposure in the pliofilm cohort', *Environmental Health Perspectives*, vol. 104, no. 6, pp. 1431-1436.

4608 Paxton, MB et al. 1994, 'Leukemia risk associated with benzene exposure in the pliofilm cohort: 1. Mortality update and exposure distribution', *Risk Analysis*, vol. 14, no. 2, pp.147-154.

26844 Paydas, S 2002, 'HCV and tumors of the immune system', *Leukemia Research*, vol. 26, p. 1141.

17372 Pearce, N et al. 1997, 'Further follow-up of New Zealand participants in United Kingdom atmospheric nuclear weapons tests in the Pacific', *Cancer Causes & Control*, vol. 8, pp. 139-145.

15943 Pearce, NE et al. 1985, 'Malignant lymphoma and multiple myeloma linked with agricultural occupations in a New Zealand cancer registry-based study', *American Journal of Epidemiology*, vol. 121, no. 2, pp. 225-237.

16002 Pearce, NE et al. 1986, 'Case-control study of multiple myeloma and farming', *British Journal of Cancer*, vol. 54, pp. 493-500. **Comms**

1435 Pelliccia, A 1991, 'The upper limit of physiologic cardiac hypertrophy in highly trained elite athletes', *New England Journal of Medicine*, vol. 324, no. 5, pp. 295-301.

54867 Perrotta, C et al. 2008, 'Multiple myeloma and farming. A systematic review of 30 years of research. Where next?', *Journal of Occupational Medicine and Toxicology*, vol. 3, p. 27.

8039 Pershagen, G 1983, 'The epidemiology of human arsenic exposure', pp. 199-232. In Fowler, B (ed). *Biological and environmental effects of arsenic*, Elsevier Science Publishers, Amsterdam.

26086 Pertovaara, M et al. 2001, 'A longitudinal cohort study of Finnish patients with primary Sjogren's syndrome: clinical, immunological, and epidemiological aspects', *Annals of the Rehumatic Diseases*, vol. 60, no. 5, pp. 467-472.

63465 Pesatori, AC et al. 2009, 'Cancer incidence in the population exposed to dioxin after the "Seveso accident": twenty years of follow-up', *Environmental Health*, vol. 8, p. 39. **Comms**

17946 Pich, A et al. 1997, [ABSTRACT] 'Risk groups of Myeloma patients by histologic pattern and proliferative activity', *American Journal of Surgical Pathology*, vol. 21, no. 3, pp. 339-347.

26859 Pickard, AL et al. 2002, 'Hyperparathyroidism and subsequent cancer risk in Denmark', *Cancer*, vol. 95, no. 8, pp. 1611-1617.

62092 Picken, MM 2007, 'Immunoglobulin light and heavy chain amyloidosis AL/AH: renal pathology and differential diagnosis', *Contributions to Nephrology*, vol. 153, pp. 135-155.

16850 Pierce, DA et al. 1996, 'Studies of the mortality of atomic bomb survivors, report 12, part 1, Cancer: 1950-1990', *Radiation Research*, vol. 146, pp. 1-27.

15762 Pira, E et al. 1999, 'Mortality among workers in the geothermal power plants at Larderello, Italy', *American Journal of Industrial Medicine*, vol. 35, pp. 636-639.

15308 Piras, MA et al. 1996, 'HIV infection and neoplasia', *The Lancet*, vol. 348, pp. 1316-1317.

27803 Pleil, JD et al. 2000, 'Personal exposure to JP-8 jet fuel vapors and exhaust at air force bases', *Environmental Health Perspectives*, vol. 108, no. 3, pp. 183-192.

3821 Pottern, LM et al. 1981, 'Oesophageal cancer among black men in Washington, DC. 1. Alcohol, tobacco and other risk factors', *Journal of the National Cancer Institute*, vol. 67, no. 4, pp. 777-783.

4567 Pottern, LM et al. 1992, 'Multiple myeloma among Danish women: employment history and workplace exposures', *Cancer Causes & Control*, vol. 3, pp. 427-432.

27603 Pratt, G 2002, 'Molecular aspects of multiple myeloma', *Journal of Clinical Pathology: Molecular Pathology*, vol. 55, no. 5, pp. 273-283.

3046 8818 Preston, DL et al. 1994, 'Cancer incidence in atomic bomb survivors. Part III. Leukemia, lymphoma and multiple myeloma, 1950-1987', *Radiation Research*, vol. 137, no. 2, pp. S68-S97.

8977 Preston-Martin, S et al. 1990, 'Increased cell division as a cause of human cancer', *Cancer Research*, vol. 50, pp. 7415-7421.

44866 Prince, MM et al. 2006, 'Mortality and exposure response among 14,458 electrical capacitor manufacturing workers exposed to polychlorinated biphenyls (PCBs)', *Environmental Health Perspectives*, vol. 114, no. 10, pp. 1508-1514.

41895 Prince, MM et al. 2006, 'Update: cohort mortality study of workers highly exposed to polychlorinated biphenyls (PCB's) during the manufacture of electrical capacitors, 1940-1998', *Environmental Health*, vol. 5, no. 13, pp. 1-10.

17077 Pukkala, E 1995, 'Cancer risk by social class and occupation. A survey of 109,000 cancer cases among Finns of working age', vol. 7, copy held in RMA library ref J4.

26183 Pukkala, E 1998, 'Cancer incidence among Finnish oil refinery workers, 1971-1994', *Journal of Occupational and Environmental Medicine*, vol. 40, no. 8, pp. 675-679.

12999 Pukkala, E Notkola, V 1997, 'Cancer incidence among Finnish farmers, 1979-93', *Cancer Causes & Control*, vol. 8, pp. 25-33.

22412 Pulik, M et al. 1998, 'Acute myeloid leukemias, multiple myelomas, and chronic leukemias in the setting of HIV infection', *AIDS Patient Care and STDs*, vol. 12, pp. 913-919.

63573 Purdue, MP et al. 2007, 'Occupational exposure to organochlorine insecticides and cancer incidence in the Agricultural Health Study', *International Journal of Cancer*, vol. 120, no. 3, pp. 642-649.

50803 Pyatt, D 2004, 'Benzene and hematopoietic malignancies', *Clinical Occupational and Environmental Medicine*, vol. 4, pp. 529-555.

65064 Pylypchuk, RD et al. 2009, 'Body mass index, height, and risk of lymphatic malignancies: a prospective cohort study', *American Journal of Epidemology*, vol. 170, no. 3, pp. 298-307.

15381 Raabe, GK et al. 1998, 'An updated mortality study of workers at a petroleum refinery in Beaumont, Texas', *American Journal of Industrial Medicine*, vol. 33, 1, pp. 61-81.

41493 Raaschou-Nielsen, O et al. 2003, 'Cancer risk among workers at Danish companies using trichloroethylene: A cohort study', *American Journal of Epidemiology*, vol. 158, no. 12, pp. 1182-1192.

26889 Rabkin, CS et al. 2002, 'Prospective study of hepatitis C viral infection as a risk factor for subsequent B-cell neoplasia', *Blood*, vol. 99, no. 11, pp. 4240-4242.

26157 Rachet, B et al. 2000, 'Cancer risk in laboratory workers: an emphasis on biological research', *American Journal of Industrial Medicine*, vol. 38, no. 6, pp. 651-665.

26119 Rafnsson, V 2001, 'Incidence of cancer among bookbinders, printers, photoengravers, and typesetters', *Occupational and Environmental Medicine*, vol. 58, no. 8, pp. 523-527.

11024 Rahu, M et al. 1997, 'The Estonian study of Chernobyl cleanup workers: II. Incidence of cancer and mortality', *Radiation Research*, vol. 147, pp. 653-657.

15315 Rajkumar, SV et al. 1998, ' Primary systemic amyloidosis with delayed progression to multiple myeloma', *Cancer*, vol. 82, pp.1501-1505.

15213 Ramlow, JM et al. 1996, 'Mortality in a cohort of pentachlorophenol manufacturing workers, 1940-1989', *American Journal of Industrial Medicine*, vol. 30, pp. 180-194.

14650 Rapiti, E et al. 1992, 'A mortality cohort study of seamen in Italy', *American Journal of Industrial Medicine*, vol. 21, pp. 863-872.

26892 Rask, C et al. 2000, 'Danish patients with untreated multiple myeloma do not harbour human herpesvirus 8', *British Journal of Haematology*, vol. 108, pp. 96-98.

26895 Rawstron, AC et al. 1997, 'Circulating plasma cells in multiple myeloma: characterization and correlation with disease stage', *British Journal of Haematology*, vol. 97, pp. 46-55.

52305 Renehan, AG et al. 2008, 'Body-mass index and incidence of cancer: a systematic review and meta-analysis of prospective observational studies', *The Lancet*, vol. 371, pp. 569-578.

60979 Renehan, AG et al. 2008, 'Obesity and cancer: pathophysiological and biological mechanisms', *Archives of Physiological and Biochemistry*, vol. 114, no. 1, pp. 71-83.

15312 Rettig, MB et al. 1997, 'Discussion; Kaposi's sarcoma-associated herpesvirus infection of bone marrow dendritic cells from multiple myeloma patients', *Science*, vol. 278, pp. 972-973.

15311 Rettig, MB et al. 1997, 'Kaposi's sarcoma-associated herpesvirus infection of bone marrow dendritic cells from multiple myeloma patients', *Science*, vol. 276, pp. 1851-1854.

60973 Reynolds, GJ et al. 2007, 'Review article: multiple myeloma and inflammatory bowel disease', *Digestive Diseases & Sciences*, vol. 52, pp. 2022-2028.

27797 Rhodes, AG et al. 2003, 'The effects of jet fuel on immune cells of fuel system maintenance workers', *Journal of Occupational & Environmental Medicine*, vol. 45, pp. 79-86.

23973 Richter, E et al. 2000, 'Cancer in radar technicians exposed to radiofrequency/microwave radiation: sentinel episodes', *International Journal of Occupational & Environmental Health*, vol. 6, no. 3, pp. 187-193.

63854 Riedel, DA et al. 1991, *Epidemiology of multiple myeloma. Neoplastic Diseases of the Blood*, 2nd edn. pp. 347-372, Churchill Livingstone Inc, New York.

4602 Rinsky, RA et al. 1987, 'Benzene and leukemia. An epidemiologic risk assessment', *New England Journal of Medicine*, vol. 316, no. 17, pp. 1044-1050.

27605 Rinsky, RA et al. 2002, 'Benzene exposure and hematopoietic mortality: a long-term epidemiological risk assessment', *American Journal of Industrial Medicine*, vol. 42, no. 6, pp. 474-480.

22083 Ritz, B 1999, 'Cancer mortality among workers exposed to chemicals during uranium processing', *Occupational & Environmental Medicine*, vol. 41, no. 7, pp. 556-566.

17998 Ritz, B 1999, 'Radiation exposure and cancer mortality in uranium processing workers', *Epidemiology*, vol. 10, no. 5, pp. 531-538.

15538 Ritz, B et al. 1999, 'Effects of exposure to external ionizing radiation of cancer mortality in nuclear workers monitored for radiation at Rocketdyne/Atomics International', *American Journal of Industrial Medicine*, vol. 35, no. 1, pp. 21-31.

26850 Rivet, J et al. 2001, 'T-cell lymphoma with eosinophilia of donor origin occurring 12 years after allogeneic bone marrow transplantation for myeloma', *Transplantation*, vol. 72, no. 5, pp. 1-3.

26595 Robbins, A 2001, [LETTER] 'Re: Benzene and lymphohematopoietic malignancies in humans', *American Journal of Industrial Medicine*, vol. 40, no. 6, pp. 714-716.

5200 Robinette, CD et al. 1980, 'Effects upon health of occupational exposure to microwave radiation (Radar)', *American Journal of Epidemiology*, vol. 112, no. 1, pp. 39-53.

26575 Robinson, BA et al. 1994, 'Second malignant neoplasms in patients with Hodgkin's disease', *Australian and New Zealand Journal of Medicine*, vol. 24, no. 4, pp. 368-373.

15353 Roff, SR 1999, 'Atomic Tests. A long time coming. After forty years, the human fallout from British nuclear tests is increasing', *New Scientist*, p. 51.

50677 Rollison, DE et al. 2006, 'Personal hair dye use and cancer: a systematic literature review and evaluation of exposure assessment in studies published since 1992', *Journal of Toxicology and Environmental Health Part B*, vol. 9, pp. 13-39.

23770 Ron, E et al. 1998, 'Cancer mortality following treatment for adult hyperthyroidism', *Journal of the American Medical Association*, vol. 280, no. 4, pp. 347-355.

16571 Ron, E et al. 1998, 'Ionizing radiation and cancer risk: evidence from epidemiology', *Radiation Research*, vol. 150, pp. S30-S41.

25873 Ronneberg, A et al. 1999, 'Occupational exposure and cancer incidence among workers from an aluminum smelter in western Norway', *Scandinavian Journal of Work, Environment & Health*, vol. 25, no. 3, pp. 207-214.

15372 Rosewell Park Memorial Institute 1977, 'A retrospective survey of cancer in relation to occupation', *National Institute for Occupational Safety and Health*, vol. 77, no. 178, pp. 1-215.

24913 Rothman, KJ 2000, 'Epidemiological evidence on health risks of cellular telephones', *Lancet*, vol. 356, pp. 1837-1840.

26898 Rottenburger, C et al. 1999, 'Clonotypic CD20 plus and CD19 plus B cells in peripheral blood of patients with multiple myeloma post high-dose therapy and peripheral blood stem cell transplantation', *British Journal of Haematology*, vol. 106, pp. 542-552.

45702 Rowland, RE et al. 2007, 'Elevated sister chromatid exchange frequencies in New Zealand Vietnam War veterans', *Cytogenet Genome Research*, vol. 116, pp. 248-251.

26580 Ruder, AM et al. 2001, 'Mortality in dry-cleaning workers: an update', *American Journal of Industrial Medicine*, vol. 39, no. 2, pp. 121-132.

52311 Rusiecki, JA et al. 2004, 'Cancer incidence among pesticide applicators exposed to atrazine in the agricultural health study', *Journal of the National Cancer Institute*, vol. 96, no. 18, pp. 1375-1382.

58800 Rusiecki, JA et al. 2009, 'Cancer incidence among pesticide applicators exposed to permethrin in the Agricultural Health Study', *Environmental Health Perspectives*, vol. 117, no. 4, pp. 581-586.

26028 Saarni, H et al. 2002, 'Cancer at sea: a case-control study among male Finnish seafarers', *Occupational and Environmental Medicine*, vol. 59, no. 9, pp. 613-619.

27342 Saif, MW Greenberg, BR 2001, 'Multiple myeloma and hairy cell leukemia: a rare association or coincidence?', *Leukemia & Lymphoma*, vol. 42, no. 5, pp. 1043-1048.

62929 Saif, MW Shannon, K 2005, 'Multiple myeloma and HIV infection: an association or coincidence', *The Journal of Applied Research*, vol. 5, no. 2, pp. 318-324.

8778 Sali, D et al. 1996, 'Cancer consequences of the Chernobyl accident in Europe outside the former USSR: a review', *International Journal of Cancer*, vol. 67, pp. 343-352.

26884 Samson, D Singer, C 2001, 'Multiple myeloma', *Journal of Clinical Medicine*, vol. 1, no. 5, pp. 365-370.

12971 Sans, S et al. 1995, 'Cancer incidence and mortality near the Baglan Bay petrochemical works, South Wales', *Occupational and Environmental Medicine*, vol. 53, pp. 217-224.

15305 Santini, GF et al. 1995, 'Waldenstrom macroglobulinemia: a role of HCV infection?', *Comment on Blood*, vol. 82, no. 9, p. 2932.

27608 Santo, J et al. 2002, 'Unusual malignant tumours in patients with HIV infection', *International Journal of STD and AIDS*, vol. 13, no. 10, pp. 674-676.

27602 Sarid, R et al. 2002, 'Virology, pathogenetic mechanisms, and associated diseases of Kaposi sarcoma - associated herpesvirus (human herpesvirus 8)', *Mayo Clinic Proceedings*, vol. 77, no. 9, pp. 941-949.

62247 Sathiakumar, N 2011, 'A review of epidemiologic studies of triazine herbicides and cancer', *Critical Reviews in Toxicology*, vol. s1, pp. 1-34.

15926 Sathiakumar, N Delzell, E 1997, 'A review of epidemiologic studies of triazine herbicides and cancer', *Critical Reviews in Toxicology*, vol. 27, no. 6, pp. 599-613.

24729 Sathiakumar, N Delzell, E 2000, 'An updated mortality study of workers at a dye and resin manufacturing plant', *Journal of Occupational and Environmental Medicine*, vol. 42, no. 7, pp. 762-771.

56048 Sathiakumar, N Delzell, E 2009, 'A follow-up study of mortality among women in the North American synthetic rubber industry', *Journal of Occupational and Environmental Medicine*, vol. 51, pp. 1314-1325.

52370 Sathiakumar, N et al. 2005, 'An updated study of mortality among North American synthetic rubber industry workers', *Occupational and Environmental Medicine*, vol. 62, pp. 822-829.

26168 Satin, KP 2002, 'Updated epidemiological study of workers at two California petroleum refineries, 1950-95', *Occupational and Environmental Medicine*, vol. 59, no. 4, pp. 248-256.

15864 Satin, KP et al. 1996, 'A 50-year mortality follow-up of a large cohort of oil refinery workers in Texas', *Journal of Occupational Environmental Medicine*, vol. 38, pp. 492-506.

9924 12867 Savitz, D Andrews, KW 1996, 'Risk of myelogenous leukaemia and multiple myeloma in workers exposed to benzene', *Occupational & Environmental Medicine*, vol. 53, no. 5, pp. 357-358.

10434 Savitz, DA 1993, 'Overview of epidemiologic research on electric and magnetic fields and cancer. *American Industrial Hygene Association*, vol. 54, no. 4, pp. 197-204.

21067 Savitz, DA 2001, 'Invited commentary: electromagnetic fields and cancer in railway workers', *American Journal of Epidemiology*, vol. 153, no. 9, pp. 836-838.

13051 Savitz, DA Andrews, KW 1996, 'Risk of myelogenous leukemia and multiple myeloma in workers exposed to benzene', *Occupational & Environmental Medicine*, vol. 53, no. 5, pp. 357-358.

3733 Schnatter, AR et al. 1993, 'A Retrospective Mortality Study among Canadian Petroleum Marketing and Distribution Workers', *Environmental Health Perspectives*', vol. 101, no. 6, pp. 85-99.

10343 Schnatter, AR et al. 1996, 'Lymphohaematopoietic malignancies and quantitative estimates of exposure to benzene in Canadian petroleum distribution workers', *Occupational Environmental Medicine*, vol. 53, no. 11, pp. 773-781.

22411 26297 Schnatter, R 2000, 'Petroleum worker studies and benzene risk assessment', *Journal of Toxicology and Environmental Health Part A*, vol. 61, pp. 433-437.

27278 Schoevaerdts, et al. Hypercalcemia, chronic lymphocytic leukemia and multiple myeloma: uncommon association', Acta Clinica Belgica', vol. 54, no. 4, pp. 217-219.

15317 Schonrich, G et al. 1998, 'Absence of a correlation between Kaposi's sarcoma-associated herpesvirus (KSHV/HHV-8) and multiple myeloma', *Blood*, vol. 92, no. 9, pp. 3474-3475.

25984 Schreinemachers, DM 2000, 'Cancer mortality in four Northern wheat-producing states', *Environmental Health Perspectives*, vol. 108, no. 9, pp. 873-881.

26196 Schreinemachers, DM et al. 1999, 'Cancer Mortality in agricultural regions of Minnesota', *Environmental Health Perspectives*, vol. 107, no. 3, pp. 205-211.

23041 Schrier, SL 1997, 'Multiple myeloma and related serum protein disorders. Scientific American Medicine, Dale DC & Federman DD (eds). Scientific American Inc. New York. chap. 5, SIX, p 1-5.

15307 Schulz, TF et al. 1996, 'HIV infection and neoplasia', *The Lancet*, vol. 348, pp. 587-591.

15360 Schwartz, GG 1997, 'Multiple myeloma: clusters, clues, and dioxins', *Cancer Epidemiology, Biomarkers & Prevention*, vol. 6, pp. 49-56.

41492 Scott, CS Chiu, WA 2006, 'Trichloroethylene cancer epidemiology: A consideration of select issues', *Environmental Health Perspectives*, vol. 114, no. 9, pp. 1471-1478.

55859 Seidler, A et al. 2007, 'Solvent exposure and malignant lymphoma: a population-based case-control study in Germany', *Journal of Occupational Medicine & Toxicology*, vol. 2, p. 2.

63142 Seidler, A et al. 2010, 'Asbestos exposure and malignant lymphoma: a multicenter case-control study in Germany and Italy', *International Archives of Occupational & Environmental Health*, vol. 83, pp. 563-570.

17518 Selby, P Gore, M 1995, 'Myeloma and other Plasma Cell Malignancies. 12.8, *Oxford Textbook of Oncology*, vol. 2, Peckham, M et al. (eds). Oxford University Press, Oxford.

14820 Selden, A Ahlborg, G Jr 1991, 'Mortality and cancer morbidity after exposure to military aircraft fuel', *Aviation, Space & Environment Medicine*, vol. 62, pp. 789-794.

63571 Selden, AI Ahlborg, G 2011, 'Cancer morbidity in Swedish dry-cleaners and laundry workers: historically prospective cohort study', *International Archives of Occupational & Environmental Health*, vol. 84, pp. 435-443.

4564 Selected Cancers Cooperative Study Group 1990, 'The association of selected cancers with service in the US military in Vietnam. I. Non-Hodgkin's lymphoma', *Archives of Internal Medicine*, vol. 150, no. 12, pp. 2473-2483.

4600 Semenciw, RM et al. 1993, 'Multiple myeloma mortality and agricultural practices in the prairie provinces of Canada', *Journal of Medicine*, vol. 35, no. 6, pp. 557-561.

26852 Sen, F et al. 'Multiple myeloma in association with sarcoidosis', *Archives of Pathology & Laboratory Medicine*, vol. 126, no. 3, pp. 365-368.

26296 Settimi, L et al. 1999, 'Mortality among workers in an Italian cigarette factory', *Occupational Medicine*, vol. 49, no. 6, pp. 361-364.

63154 Sharma, S et al. 2011, 'Plasma cell myeloma in a renal transplant recipient: A case report and review of literature', *Indian Journal of Nephrology*, vol. 21, no. 4, pp. 270-272.

62089 Shehata, N et al. 2008, 'The use of erythropoiesis-stimulating agents in patients with non-myeloid hematological malignancies: a systematic review', *Annals of Hematology*, vol. 87, pp. 961-973.

11443 Sheil, AGR 1995, 'Malignancy following liver transplantation: a report from the Australian combined liver transplant registry', *Transplantation Proceedings*, vol. 27, no. p. 1247.

15382 Shiel, AGR et al. 1985, 'Cancer in dialysis and transplant patients', *Transplantation Proceedings*, vol. 17, pp. 195-198.

5109 Shigematsu, I et al. 1986, *Cancer in Atomic Bomb Survivors. GANN Monograph on Cancer Research, no 32,: 1-8; 9-28. Japan Scientific Societies Press, Tokyo*, Plenum Press, New York.

62392 Shimizu, Y et al. 1990, 'Cancer risk among atomic bomb survivors. The RERF Life Span Study', *Journal of the American Medical Association*, vol. 264, no. 5, pp. 601-604.

7486 Shimizu, Y et al. 1991, 'Risk of cancer among atomic bomb survivors', *Journal of Radiation Research*, vol. 2, pp. 54-63.

62091 Shortt, CP et al. 2010, 'The role of whole-body imaging in the diagnosis, staging, and follow-up of multiple myeloma', *Seminars in Musculoskeletal Radiology*, vol. 14, no. 1, pp. 37-46.

26886 Signorello, LB et al. 2001, 'Nationwide study of cancer risk among hip replacement patients in Sweden', *Journal of the National Cancer Institute*, vol. 93, no. 18, pp. 1405-1410.

27606 54757 Silver, SR et al. 2002, 'Effect of follow-up time on risk estimates: a longitudinal examination of the relative risks of leukemia and multiple myeloma in a rubber hydrochloride cohort;, *American Journal of Industrial Medicine*, vol. 42, no. 6, pp. 481-489.

15304 Silvestri, F et al. 1996, 'Risk of hepatitis C virus infection, Waldenstrom's macroglobulinemia, and monoclonal gammopathies', *Blood*, vol. 88, no. 3, pp. 1125-1126.

60972 Sirohi, B Powles, R 2006, 'Epidemiology and outcomes research for MGUS, myeloma and amyloidosis', *European Journal of Cancer*, vol. 42, pp. 1671-1683.

25815 Smith, AH Lopipero, P 2001, 'Invited commentary: How do the Seveso findings affect conclusions concerning TCDD as a human carcinogen?', *American Journal of Epidemiology*, vol. 153, no. 11, pp. 1045-1047.

16952 Smith, PP Douglas, AJ 1986, 'Mortality of workers at the Sellafield plant of British nuclear fuels', *British Medical Journal Clinical Research*, vol. 293, no. 6551, pp. 845-854.

22410 Sonawane, B et al. 2000, 'Carcinogenic effects of benzene - a status update and research needs to improve risk assessment: US EPA perspective, Part A', *Journal of Toxicology & Environmental Health*, pp. 471-472.

27425 Sonoda, T et al. 2001, 'Meta-analysis of multiple myeloma and benzene exposure', *Journal of Epidemiology*, vol. 11, no. 6, pp. 249-254.

63169 Sonoda, T et al. 2005, 'A case-control study of multiple myeloma in Japan: Association with occupational factors', *Asian Pacific Organization for Cancer Prevention*, vol. 6, pp. 33-36.

26169 Sont, WN et al. 2001, 'First analysis of cancer incidence and occupational radiation exposure based on the national dose registry of Canada', *American Journal of Epidemiology*, vol. 153, no. 4, pp. 309-318.

26171 Sont, WN et al. 2001, 'Respond to Studies of workers exposed to low doses of radiation', *American Journal of Epidemiology*, vol. 153, no. 4, pp. 323-324.

63339 Sorahan, T 2011, [COMMENT] 'Occupational benzene exposure and lymphoma risks. *Environmental Health Perspectives*, vol. 119, no. 11, pp. A468-A469.

26193 Sorahan, T et al. 2002, 'Mortality of United Kingdom oil refinery and petroleum distribution workers, 1951-1998', *Occupational Medicine*, vol. 52, no. 6, pp. 333-339.

38735 Sorahan, T et al. 2005, 'Cancer risks in a historical UK cohort of benzene exposed workers', *Occupational & Environmental Medicine*, vol. 62, no. 4, pp. 231-236.

26854 Speer, SA et al. 2002, 'Risk factors for acute myeloid leukemia and multiple myeloma: a combination of GIS and case-control studies', *Journal of Environmental Health*, vol. 64, no. 7, pp. 9-16.

26160 Sperati, A et al. 1999, 'Mortality among male licensed pesticide users and their wives', *American Journal of Industrial Medicine*, vol. 36, no. 1, pp. 142-146.

16940 Spinelli, JJ et al. 1984, 'Multiple myeloma, leukemia, and cancer of the ovary in cosmetologists and hairdressers', *American Journal of Industrial Medicine*, vol. 6, no. 2, pp. 97-102.

7450 Spirtas, R et al. 1991, 'Retrospective cohort mortality study of workers at an aircraft maintenance facility. I epidemiological results', *British Journal of Industrial Medicine*, vol. 48, pp. 515-530.

26238 Stagnaro, E et al 2001, 'Smoking and hematolymphopoietic malignancies', *Cancer Causes & Control*, vol. 12, no. 4, pp. 325-334.

18052 Stather, J et al. 1995, 'Radiation-induced cancer at low doses and low dose rates', *Radiological Protection Bulletin*, vol. 167, pp. 8-12.

24609 Steenland, K Boffetta, P 2000, 'Lead and cancer in humans: where are we now?', *American Journal of Industrial Medicine*, vol. 38, no. 3, pp. 295-299.

25814 Steenland, K et al. 1999, 'Cancer, heart disease, and diabetes in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin', *Journal of the National Cancer Institute*, vol. 91, no. 9, pp. 779-786. **Comms**

38736 Steenland, K et al. 2004, 'Mortality analyses in a cohort of 18 235 ethylene oxide exposed workers: follow up extended from 1987 to 1998', *Occupational and Environmental Medicine*, vol. 61, no. 1, pp. 2-7.

23674 Steenland, K Palu, S 1999, 'Cohort mortality study of 57 000 painters and other union members: a 15 year update', *Occupational & Environmental Medicine*, vol. 56, pp. 315-321.

15905 Steineck, G Wiklund, K 1986, 'Multiple myeloma in Swedish agricultural workers', *International Journal of Epidemiology*, vol. 15, no. 3, pp. 321-325.

52324 Straif, K et al. et al. 2007, 'Carcinogenicity of shift-work, painting, and fire-fighting', *Lancet Oncology*, vol. 8, no. 12, pp. 1065-1066.

24613 Straughan, JK Sorahan, T 2000, 'Cohort mortality and cancer incidence survey of recent entrants, 1982-91, to the United Kingdom rubber industry: preliminary findings', *Occupational and Environmental Medicine*, vol. 57, no. 8, pp. 574-576.

15409 Sulzner, SE et al. 1998, 'Extramedullary plasmacytoma of the head and neck', *American Journal of Otolaryngology*, vol. 19, no. 3, pp. 203-208.

63151 Sun, X et al. 2004, 'Post-transplant plasma cell myeloma and polymorphic lymphoproliferative disorder with monoclonal serum protein occurrin in solid organ transplant recipients', *Modern Pathology*, vol. 17, no. 389-394.

50757 Svec, MA et al. 2005, 'Risk of lymphatic or haematopoietic cancer mortality with occupational exposure to animals or the public', *Occupational and Environmental Medicine*, vol. 62, pp. 726-735.

15118 Svensson, BG et al. 1995, 'Mortality and cancer incidence among Swedish fishermen with a high dietary intake of persistent organochlorine compounds', *Scandinavian Journal of Work, Environmental and Health*, vol. 21, no. 2, pp. 106-115.

63696 Swaen, G et al. 2005, 'Leukemia risk in caprolactam workers exposed to benzene', *Annals of Epidemiology*, vol. 15, pp. 21-28.

64418 Swaen, GM et al. 2009, 'Mortality study update of ethylene oxide workers in chemical manufacturing: a 15 year update', *Journal of Occupational and Environmental Medicine*, vol. 51, pp. 714-23.

27487 Swerdlow, AJ et al. 2001, 'Mortality and cancer incidence in persons with numerical sex chromosome abnormalities: a cohort study', *Annals of Human Genetics*, vol. 65, pt. 2, pp. 177-188.

15386 Szekely, L Klein, G 1997, 'Multiple myeloma and Kaposi's sarcoma-associated herpesvirus-a paracrine model of tumorigenesis?', *Trends in Microbiology*, vol. 5, no. 11, pp. 424-426.

10413 Szmigielski, S 1996, 'Cancer morbidity in subjects occupationally exposed to high frequency (radiofrequency and microwave) electromagnetic radiation', *The Science of the Total Environment*, vol. 180, pp. 9-17.

34856 't Mannetje, A et al. 2005, 'Mortality in New Zealand workers exposed to phenoxy herbicides and dioxins', *Occupational and Environmental Medicine*, vol. 63, no. 34-40. **Comms**

63761 Takkouche, B et al. 2005, 'Personal use of hair dyes and risk of cancer', *Journal of the American Medical Association*, vol. 293, no. 20, pp. 2516-2525.

60713 Takkouche, B et al. 2009, 'Risk of cancer among hairdressers and related workers: a meta-analysis', *Internationl Journal of Epidemology*, vol. 38, pp. 1512-1531.

25829 Tanaka, M et al. 1998, 'Coexistence of chronic myelogenous leukemia and multiple myeloma. Case report and review of the literature', *Acta Haematologica Polonica*, vol. 99, no. 4, pp. 221-223.

22513 Tarte, K et al. 1999, 'Kaposi's sarcoma-associated herpesvirus and multiple myeloma: lack of criteria for causality', *Blood*, vol. 93, no. 10-12, pp. 3159-3163.

26835 Tattevin, P et al. 2002, 'Chronic lymphocytic lymphoma and multiple myeloma in a patient infected with human herpesvirus 8 (HHV-8)', *American Journal of Hematology*, vol. 71, no. 2, pp. 38-39.

22737 Tavani, A et al. 2000, 'Red meat intake and cancer risk: a study in Italy', *International Journal of Cancer*, vol. 86, no. 3, pp. 25-28.

34929 Tavani, A et al. 2005, 'Hair dye use and risk of lymphoid neoplasms and soft tissue sarcomas', *International Journal of Cancer*, vol. 113, pp. 629-631.

26888 Tedeschi, R et al. 2001, 'A prospective seroepidemiological study of human herpesvirus-8 infection and the risk of multiple myeloma, *British Journal of Cancer*, vol. 84, no. 1, pp. 122-125.

22501 26824 Teitelbaum, DT Brautbar, N 2000, 'Benzene and multiple myeloma: appraisal of the scientific evidence', *Blood*, vol. 95, no. 9, pp. 2995-2997.

63164 63195 Telle-Lamberton, M et al. 2007, 'External radiation exposure and mortality in a cohort of French nuclear workers', *Occupational and Environmental Medicine*, vol. 64, pp. 694-700.

26842 Terpos, E et al. 2000, 'Sjogren's syndrome associated with multiple myeloma', *Annals of Hematology*, vol. 79, no. 8, pp. 449-451.

26165 Teta, MJ et al. 1999, 'Ethylene oxide cancer risk assessment based on epidemiological data: application of revised regulatory guidelines', *Risk Analysis*, vol. 19, no. 6, pp. 1135-1155.

26702 Thaul, S et al. 2000, *The Five Series Study: Mortality of military participants in US nuclear weapons tests*, National Academy Press, Washington.

63849 *The Australian Institute of Petroleum Health Surveillance Program*, *2007, Health Report*, 13th Report.

10435 Theriault, G et al. 1994, 'Cancer risks associated with occupational exposure to magnetic fields among electric utility workers in Ontario and Quebec, Canada, and France, 1970-1989', *American Journal of Epidemiology*, vol. 139, no. 6, pp. 550-572.

24615 Thomas, E et al. 2000, 'Risk of malignancy among patients with rheumatic conditions', *International Journal of Cancer*, vol. 88, no. 3, pp. 497-502.

3268 Thomas, TL et al. 1984, 'Cancer mortality patterns by work category in three Texas oil refineries', *American Journal of Industrial Medicine*, vol. 6, pp. 3-16.

26118 Thorn, A et al. 2000, 'Mortality and cancer incidence among Swedish lumberjacks exposed to phenoxy herbicides', *Occupational and Environmental Medicine*, vol. 57, no. 10, pp. 718-720. **Comms**

15056 Tolbert, PE 1997, 'Oils and cancer', *Cancer Causes & Control*, vol. 8, pp. 386-405.

17067 Tollerud, DJ et al. 1985, 'Mortality from multiple myeloma among North Carolina furniture workers', *Journal of the National Cancer Institute*, vol. 74, no. 4, pp. 799-801.

35941 Travis, LB et al. 2003, 'Site-specific cancer incidence and mortality after cerebral angiography with radioactive thorotrast', *Radiation Research*, vol. 160, pp. 691-706.

27823 Tsai, SP Wendt, JK 2001,[ABSTRACT] 'Health findings from a mortality and morbidity surveillance of refinery employees', *Annals of Epidemiology*, vol. 11, no. 7, p. 466.

62173 Tsuda, T et al. 2009, [COMMENT] 'UNSCEAR 2006 inadequately cited, A case control study of multiple myeloma at four nuclear facilities', *Annals of Epidemiology*, vol. 19, no. 7, pp. 519-521, comment on ID: 62172.

61046 Tuscano, JM 2008, 'Multiple myeloma: epidemiology and therapeutic options', *The American Journal of Managed Care*, vol. 17, no. 7.6, pp. 9-75.

30513 Tynes, T Haldorsen, T 2003, 'Residential & Occupational Exposure to 50 Hz Magnetic Fields & Hematological Cancers in Norway', *Cancer Causes & Control*, vol. 14, no. 8, p. 715-720.

4561 Uchiumi, H et al. 1993, [COMMENT] 'Does sarcoidosis induce multiple myeloma?', *American Journal of Hematology*, vol. 44, no. 3, p. 220.

27801 Ullrich, SE 1999, 'Dermal application of JP-8 jet fuel induces immune supression', *Toxicological Sciences*, vol. 52, pp. 61-67.

18947 UNSCEAR 2000, *Epidemiological Evaluation of Radiation-Induced Cancer*, Annex F. Forty-ninth session of UNSCEAR, Vienna.

21788 *UNSCEAR 2000, Effects. Sources and effects of ionizing radiation*, vol. 11, New York.

61775 UNSCEAR 2006, 'Effects of ionizing radiation. United Nations Committee on the Effects of Atomic Radiation Report to the General Assembly', accessed http:www.unscear.org/docs/reports/2006/07-82087_Report 2006_Web.pdf

21787 UNSCEAR 2000, 'Sources and effects of ionizing radiation', *Report to the General Assembly,with Scientific Annex*, vol. 1.

64394 UNSCEAR 2006, 'Multiple myeloma. Effects of Ionizing Radiation', vol. 1A, pp. 111-117, United Nations Publication.

15331 Usman, AR Yunus, MB 1996, 'Non-Hodgkin's Lymphoma in patients with rheumatoid arthritis treated with low dose methotrexate', *Journal of Rheumatology*, vol. 23, pp. 1095-1097.

64419 Valdez-Flores, C et al. 2010, 'Quantitative cancer risk assessment based on NIOSH and UCC epidemiological data for workers exposed to ethylene oxide', *Regulatory Toxicology and Pharmacology*, vol. 56, pp. 313-320.

27228 van de Broek, I et al. 2002, 'Multiple myeloma, a model for fundamental and clinical research', *Verhandelingen - Koninklijke Academie voor Geneeskunde van België*, vol. 64, no. 4, pp. 261-286.

15324 van den Eeden, SK Friedman, GD 1993, 'Exposure to engine exhaust and risk of subsequent cancer', *Journal of Occupational Medicine*, vol. 35, no. 3, pp. 307-311.

61730 van der Gulden, JW 1997, [COMMENT] 'Excess mortality among golf course attendants', *American Journal of Industrial Medicine*, vol. 32, p. 98, comment on ID: 56146.

24771 van Kaick, G et al. 1999, 'The German thorotrast study: recent results and assessment of risks', *Radiation Research*, vol. 152, pp. S64-S71.

26576 van Leeuwen, FE et al. 2000, 'Long-term risk of second malignancy in survivors of Hodgkin's disease treated during adolescence or young adulthood', *Journal of Clinical Oncology*, vol. 18, no. 3, pp. 487-497.

26419 Varady, E et al. 2001, 'Second malignancies after treatment for Hodgkin's disease', *Leukaemia Lymphoma*', vol. 42, no. 6, pp. 1275-1281.

14305 Verschaeve, L Maes, A 1998, 'Genetic, carcinogenic and teratogenic effects of radiofrequency fields', *Mutation Research*, vol. 410, no. 2, pp. 141-165.

15421 Viadana, E et al. 1976, 'Cancer experience of men exposed to inhalation of chemicals or to combustion products', *Journal of Occupational Medicine*, vol. 18, no. 12, pp. 787-792.

961 Viel, JF Richardson, ST 1993, 'Lymphoma, multiple myeloma and leukaemia among French farmers in relation to pesticide exposure', *Social Science & Medicine,* vol. 37, no. 6, pp. 771-777.

14554 Vineis, P et al. 1992, 'The role of occupational exposure and immunodeficiency in B-Cell malignancies', *Epidemiology*, vol. 3, no. 3, pp. 266-270.

26084 Vineis, P et al. 2000, 'Haematopoietic cancer and medical history: a multicentre case control study', *Journal of Epidemiology & Community Health*, vol. 54, no. 6, pp. 431-436.

27897 Viscido, A et al. 2001, 'Survival and causes of death in Italian patients with ulcerative colitis. A GISC nationwide study', *Digestive and Liver Disease*, vol. 33, no. 8, pp. 686-692.

60463 Vlaanderen, J 2011, 'Occupational benzene exposure and the risk of lymphoma subtypes: a meta-analysis of cohort studies incorporating three study quality dimensions', *Environmental Health Perspectives*, vol. 119, no. 2, pp. 159-167.

45582 Wachtel, TJ Ferri, FF 2007, *Multiple Myeloma*, Ferri's Clinical Advisor 2007: Instant Diagnosis and Treatment, 9th edn.

60967 Wadhera, RK Rajkumar, V 2010, 'Prevalence of monoclonal gammopathy of undetermined significance: a systemic review', *Mayo Clinical Proceedings*, vol. 85, no. 10, pp. 933-942.

65065 Wallin, A Larsson, SC 2011, 'Body mass index and risk of multiple myeloma: a meta-analysis of prospective studies. *European Jounrnal of Cancer*, vol. 47, pp. 1606-1615.

24707 Wannamethee, SG et al. 2001, 'Physical activity and risk of cancer in middle-aged men', *British Journal of Cancer*, vol. 85, no. 9, pp. 1311-1316.

15055 Ward, EM et al. 1997, 'Industries and cancer', *Cancer Causes & Control*, vol. 8, pp. 356-370.

20703 Wartenberg, D et al. 2000, 'Trichloroethylene and cancer: epidemiologic evidence', *Environmental Health Perspective*, vol. 108, no. S2, pp. 161-176.

26828 Wassberg, C et al. 1999, 'Cancer risk in patients with earlier diagnosis of cutaneous melanoma in situ', *International Journal of Cancer*, vol. 83, no. 3, pp. 314-317.

14725 Watanabe, KK et al. 1991, 'Mortality among Vietnam veterans: with methodological considerations', *Journal of Occupational*, vol. 33, no. 7, pp. 780-785.

7499 Watanabe, KK et al. 1995, 'Cancer mortality risk among military participants of a 1958 atmospheric nuclear weapons test', *American Journal of Public Health*, vol. 85, no. 4, pp. 523-527.

7199 Watanabe, KK Kang, HK 1996, 'Mortality patterns among Vietnam Veterans: a 24-year retrospective analysis', *Journal of Occupational & Environmental Medicine*, vol. 38, no. 3, pp. 272-278.

62068 Weber, DM 2005, 'Solitary bone and extramedullary plasmacytoma', *Hematology*, pp. 373-376.

17951 Weber, DM et al. 1997, [ABSTRACT], 'Prognostic features of asymptomatic multiple', *British Journal of Haematology*, vol. 97, no. 4-II, pp. 810-814.

63463 Weichenthal, S et al. 2010, 'A review of pesticide exposure and cancer incidence in the Agricultural Health Study Cohort', *Environmental Health Perspectives*, vol. 118, no. 8, pp. 1117-1125.

65050 Weichenthal, S et al. 2012, 'A review of pesticide exposure and cancer incidence in the agricultural health study cohort', *Cien Saude Colet*, vol. 17, no. 1, pp. 255-270.

26536 Wei-Lu, X Wang Jian, Z 1994, 'Estimate of cancer risk for a large population continuously exposed to higher background radiation in Yangjiang, China', *Chinese Medical Journal*, vol. 107, pp. 541-544.

15385 Weimer, K et al. 1998, 'Further examination of employment in the chemical industry: follow-up case-control study of hematopoietic and lymphoid neoplasms using a next consecutive death control group', *American Journal of Industrial Medicine*, vol. 33, pp. 97-98.

7373 Weiss, HA et al. 1994, 'Cancer mortality following x-ray treatment for ankylosing spondylitis', *International Journal of Cancer*, vol. 59, pp. 327-338.

19209 White, RF Proctor, SP 1997, 'Solvents and neurotoxicity', *The Lancet*, vol. 349, pp. 1239-1243.

15422 Whorton, MD et al. 1983, 'Feasibility of identifying high-risk occupations through tumor registries', *Journal of Occupational Medicine*, vol. 25, no. 9, pp. 657-660.

64493 Wilczynska, U et al. 2001, 'Cancer mortality in rubber tire workers in Poland', *International Journal of Occupational Medicine & Environmental Health*, vol. 14, no. 2, pp. 115-125.

62069 Wilder, RB et al. 2002, 'Persistence of myeloma protein for more then one year after radiotherapy is an adverse prognostic factor in solitary plasmacytoma of bone', *Cancer*, vol. 94, pp. 1532-1537.

26116 Wilkinson, P et al. 1999, 'Lymphohaematopoietic malignancy around all industrial complexes that include major oil refineries in Great Britain', *Occupational and Environmental Medicine*, vol. 56, no. 9, pp. 577-580.

43077 Wilson, EJ et al. 2005, *Cancer incidence in Australian Vietnam veterans study. Australian Institute of Health and Welfare*, Department of Veterans Affairs, Canberra. **Comms**

41296 Wilson, EJ et al. 2005, *The Third Australian Vietnam Veterans Mortality Study*, Department of Veterans Affairs, Canberra.

11083 Wing, S et al. 1997, 'A Re-evaluation of Cancer Incidence near the Three Mile Island Nuclear Plant: The Collision of evidence and Assumptions', *Environmental Health Perspectives*, vol. 105, no. 1, pp. 52-57.

22498 Wing, S et al. 2000, 'A case control study of multiple myeloma
62172 at four nuclear facilities', *Annals of Epidemiology*, vol. 10, pp. 144-153.

17945 Winther, JF et al. 1997, [ABSTRACT] 'Radiation', *Acts Pathologica et Immunologica Scandinavica*, vol. 105, no. 76, pp. 83-99.

60964 Wolin, KY et al. 2010, 'Obesity and cancer', *The Oncologist*, vol. 15, pp. 556-565.

27824 Wolk, A et al. 2001, [ABSTRACT] 'A prospective study of obesity and cancer risk, Sweden', *Cancer Causes & Control*, vol. 12, no. 1, p. 13.

8932 Wong, O 1987, 'An industry wide mortality study of chemical workers occupationally exposed to benzene, I general results', *British Journal of Industrial Medicine*, vol. 44, pp. 365-381.

8933 Wong, O 1987, 'An industry wide mortality study of chemical workers occupationally exposed to benzene, I dose response analyses', *British Journal of Industrial Medicine*, vol. 44, pp. 382-395.

4594 Wong, O 1995, 'Risk of acute myeloid leukaemia and multiple myeloma in workers exposed to benzene', *Occupational and Environmental Medicine*, vol. 52, pp. 380-384.

26040 Wong, O 1999, 'A critique of the exposure assessment in the epidemiologic study of benzene-exposed workers in China conducted by the Chinese Academy of Preventive Medicine and the US National Cancer Institute', *Regulatory Toxicology and Pharmacology*, vol. 30, no. 3, pp. 259-267.

4601 Wong, O et al. 1993, 'Health effects of gasoline exposure. II. Mortality patterns of distribution workers in the United States', *Environmental Health Perspectives*, vol. 101, no. 6, pp. 63-76.

4595 Wong, O et al. 1994, 'An updated cohort mortality study of workers exposed to styrene in the reinforced plastics and composites industry', *Occupational & Environmental Medicine*, vol. 51, pp. 386-396.

26197 Wong, O et al. 1998, [LETTERS] 'Re: Benzene and the dose-related incidence of hematologic neoplasms in China', *Journal of the National Cancer Institute*, vol. 90, no. 6, pp. 469-471.

22241 Wong, O et al. 1999, 'Nested case-control study of leukaemia,
22497 multiple myeloma, and kidney cancer in a cohort of petroleum workers exposed to gasoline', *Occupational and Environmental Medicine*, vol. 56, pp. 217-221.

26186 Wong, O et al. 2001, 'An updated mortality study of workers at a petroleum refinery in Beaumont, Texas, 1945 to 1996', *Journal of Occupational and Environmental Medicine*, vol. 43, no. 4, pp. 384-401.

63756 Wong, O et al. 2010, 'A hospital-based case-control study of non-Hodgkin lymphoid neoplasms in shanghai: Analysis of personal characteristics, lifestyle, and environmental risk factors by subtypes of the WHO classification', *Journal of Occupational & Environmental Medicine*, vol. 52, no. 1, pp. 39-53.

24625 Wong, O Harris, F 2000, 'Cancer mortality study of employees at lead battery plants and lead smelters, 1947-1995', *American Journal of Industrial Medicine*, vol. 38, no. 3, pp. 255-270.

12903 Wong, O Raabe, GK 1997, 'Multiple myeloma and benzene exposure in a multinational cohort of more than 250,000 petroleum workers', *Regulatory, Toxicology & Pharmacology*, vol. 26, pp. 188-199.

62420 Wright, EG Coates, PJ 2006, 'Untargeted effects of ionizing radiation: implications for radiation pathology', *Mutation Research*, vol. 597, pp. 119-132.

27896 Yamamoto, S 2002, 'Multiple myeloma incidence in the world', *Japanese Journal of Clinical Oncology*, vol. 32, no. 11, p. 488.

12967 Yardley-Jones, A et al. 1991, 'The toxicity of benzene and its metabolism and molecular pathology in human risk assessment', *British Journal of Industrial Medicine*, vol. 48, pp. 437-444.

26838 Yee, TT et al. 2001, 'Mehta AB. Multiple myeloma and human immunodeficiency virus-1 (HIV-1) infection', *American Journal of Hematology*, vol. 66, no. 2, pp. 123-125.

62170 Yiin, JH et al. 2009, 'A nested case-control study of multiple myeloma risk and uranium exposure among workers at the Oak Ridge Gaseous Diffusion Plant', *Radiation Research*, vol. 171, pp. 637-645.

15740 Yin, SN et al. 1996, 'A cohort study of cancer among benzene-exposed workers in China: overall results', *American Journal of Industrial Medicine*, vol. 29, pp. 227-235.

45822 Youakim, S 2006, 'Risk of cancer among firefighters: a quantitative review of selected malignancies', *Archives of Environmental & Occupational Health*, vol. 61, no. 5, pp. 223-231.

4598 Zahm, SH et al. 1992, 'Sex differences in the risk of multiple myeloma associated with agriculture', *British Journal of Industrial Medicine*, vol. 49, pp. 815-816.

1598 Zahm, SH et al. 1992, 'Use of hair coloring products and the risk of lymphoma, multiple myeloma, and chronic lymphocytic leukemia', *American Journal of Public Health*, vol. 82, no.7, pp. 990-997.

27804 Zeiger, E Smith, L 1998, 'The first international conference on the environmental health and safety of jet fuel', *Environmental Health Perspectives*, vol. 106, no. 11, pp. 763-764.

65066 Zhang, W et al. 2010, 'Incidence of malignancy in primary Sjogren's syndrome in a Chinese cohort', *Rheumatology*, vol. 49, pp. 571-577.

10807 Zulian, GB 1997, 'Multiple Myeloma: Clinical evaluation of plasma cell lymphoproliferative disorders and initial management', *Seminars in Haematology*, vol. 34, no. S1, pp. 29-39.

15410 Zulian, GB et al. 1998, 'Multiple myeloma', *Critical Reviews in Oncology-Hematology*, vol. 27, no. 2, pp 165-167.

TABLE 3 – Applicant 'New' Information

Harper, A 2003, *Report of expert medical panel to evaluate recommendations of the Kimberley chemical use review, final report*, West Australian Government, Perth WA, pp. 1-58.

National Defence and Canadian Armed Forces no date, *The use of herbicides at GFB Gagetown from 1952 to present, Defence*, pp. 1-22 accessed on 2/10/2013 by the Applicant via http://www.forces.gc.ca/en/about-reports-pubs/herbicides-gagtown.page

Durie, BGM 2013, *New study provides clues to what causes myeloma*, pp. 1-7 accessed on 3/10/2013 by the Applicant via http://myeloma.org/MtEntryPage_action?source=/imf_blogs/myeloma_voices/2013/01/