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Letters to the Editor

Readers are invited to submit letters for publication in this department. Submit to Doris Flournoy, Publisher, Journal of Occupational Medicine, 1845 W. Morse, Chicago, IL 60626. Letters should be typewritten, double spaced and should be designated "For Publication."

Cancer Mortality of Canadian Workers Exposed to VCM: A Three Year Follow-up

To the Editor: In a previous issue of JOM, we reported the results of a mortality study conducted in 1978 on a group of Canadian workers exposed to vinyl chloride monomer (JOM 23: 671-676, 1981). Liver cancers were found to be in excess, but neither brain nor lung cancers were higher than expected. Since the exposed workers were known to have a cigarette smoking experience similar to those not exposed, it was concluded that the association between lung cancer and VCM exposure previously reported could be questioned. We would like to report the results of a three year follow-up of this study conducted in 1981.

The methodology used was essentially the same as in the 1978 study. The vital status was established through correspondence or by telephone conversation with the men who constituted the first study population. The cause of death was certified from the death certificates. The assignment of the men into the exposed and unexposed cohort was done as previously, not considering the exposure during the last three years. Of the 1,310 men who constituted the original study population, 38 could not be traced in the second study (11 in the exposed cohort, 27 in the unexposed one) leaving the new study population at 1,272 men.

In the exposed cohort, 14 men died during the three year follow-up (three cancers: lung, stomach and larynx). Meanwhile, 66 men died in the unexposed cohort (10 cancers). Table 1 shows the deaths observed in the VCM-exposed and unexposed cohorts, age-adjusted relative risks, and confidence intervals of the relative risk

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as of Jan. 31, 1981. The excess of mortality due to cancers of the digestive system in the exposed group persisted (RR 3.10, confidence interval 1.61-5.96) whereas there is no excess in the other causes of death.

Table 2 shows the standardized mortality ratios (SMR) for the exposed workers in comparison with the entire population of the Province of Quebec. Again, a significant excess is noted for cancer of the digestive system only. No other cancers are in excess.

The expected numbers of lung

cancers was 7.05, the number observed was three (SMR 42.55). Even though this follow-up study covers an observation period three years longer than the previous one, the number of person-years of observation remained approximately the same due to loss to follow-up. Nevertheless, the lung cancer rates are still low and seem to negate its association with VCM exposure.

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AOMA/AAOM New Address

The address of the headquarters office of the American Occupational Medical Association/American Academy of Occupational Medicine is now 2340 S. Arlington Heights Rd., Arlington Heights, IL 60005; telephone: 312/228-6850.

**Table 1 - Deaths Observed in the VCM Exposed and Unexposed Cohorts,
Age-Adjusted Relative Risks and Confidence Intervals of the RR**

Cause of Death	No. of Cases		Relative Risk	95% Confidence Interval of the Relative Risk
	Exposed	Unexposed		
All cancers (140-209)	23	64	1.01	1.00 - 1.02
Mouth and pharynx (140-149)	0	2	—	—
Digestive (150-159)	15	14	3.10	1.61 - 5.96*
Respiratory (160-163)	4	24	0.49	0.12 - 1.93
Bone, skin, connective (170-173)	2	3	1.13	0.38 - 3.36
Urogenital (185-189)	1	8	0.57	0.10 - 3.10
Eye, CNS (190-192)	0	2	—	—
Leukemia (200-209)	1	4	1.15	0.07 - 26.13
Others cancers	0	7	—	—
Cardiovascular (390-458)	30	150	0.72	0.49 - 1.05
Respiratory (460-519)	7	21	1.97	0.51 - 7.65
Digestive (520-577)	4	12	1.27	0.29 - 5.49
Accidents and violence (800-999)	2	15	0.83	0.68 - 1.02
Others (3 age unknown)	7	37	0.94	0.69 - 1.27
TOTAL	73	299	0.92	0.80 - 1.06

* p = 0.05

Table 2 - Observed and Expected Numbers of Deaths in the VCM-Exposed Cohort and Standardized Mortality Ratios (SMR)

Cause of Death		Observed	Expected	SMR
All cancers	(140-209)	23	21.47	107.13
Mouth and pharynx	(140-149)	0	0.81	0
Digestive	(150-159)	15	7.17	209.21*
Respiratory	(160-163)	4	7.69	52.02
Bone, skin, connective	(170-173)	2	0.50	400.02
Urogenital	(185-189)	1	1.90	100.53
Eye, CNS	(190-192)	0	0.57	0.0
Leukemia	(200-209)	1	2.07	48.31
Others cancers		0	0.71	0.0
Cardiovascular	(390-458)	30	41.83	71.72
Respiratory	(460-519)	7	4.38	159.82
Digestive	(520-577)	4	4.83	82.82
Accidents and violence	(800-999)	2	11.69	17.11**
Others		7	6.85	102.19
TOTAL		73	91.09	80.14

* p < 0.05 ** p < 0.01