

eTable. Standardized Mortality Ratios (SMRs) for All Causes by Ammonium Perfluorooctanoate Exposure Category

Cause <sup>a</sup>	Employed in Definite or Probable Ammonium Perfluorooctanoate Exposed Jobs								
	Ever Definite Exposure			Ever Probable/Never Definite			Never		
	Observed	SMR <sup>b</sup>	95% CI	Observed	SMR <sup>b</sup>	95% CI	Observed	SMR <sup>b</sup>	95% CI
<b>All deaths</b>	68	0.88	0.68-1.12	368	0.83	0.75-0.92	371	0.77	0.70-0.86
<b>Cancers</b>									
All cancers	19	0.87	0.52-1.35	119	0.94	0.78-1.12	108	0.78	0.64-0.95
Buccal cavity and pharynx	0	*	0.00-7.78	1	0.40	0.01-2.25	1	0.39	0.01-2.14
Digestive organs and peritoneum	4	0.75	0.20-1.91	27	0.87	0.57-1.26	30	0.90	0.61-1.28
Esophagus	1	1.54	0.04-8.57	1	0.31	0.01-1.70	2	0.59	0.07-2.13
Stomach	0	*	0.00-5.82	4	1.06	0.29-2.71	3	0.74	0.15-2.15
Large Intestine	2	1.07	0.13-3.86	10	0.88	0.42-1.62	16	1.30	0.75-2.12
Rectum	0	*	0.00-9.24	3	1.28	0.26-3.76	1	0.40	0.01-2.22
Biliary passages and liver primary	0	*	0.00-7.60	2	0.71	0.09-2.55	1	0.33	0.01-1.83
Pancreas	1	0.85	0.02-4.74	7	1.04	0.42-2.14	5	0.70	0.23-1.63
Other	0	*	0.00-24.2	0	*	0.00-4.15	2	2.11	0.25-7.60
Respiratory System	9	1.27	0.58-2.40	38	0.99	0.70-1.36	32	0.78	0.53-1.10

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Larynx	1	4.72	0.12-26.23	1	0.91	0.02-5.03	1	0.86	0.02-4.79
Trachea, bronchus, and lung	8	117	0.51-2.31	37	1.00	0.71-1.38	30	0.76	0.51-1.09
Other	0	*	0.00-45.63	0	*	0.00-9.05	1	2.30	0.03-12.76
Breast <sup>c</sup>	0	*	0.00-12.54	2	0.42	0.05-1.53	4	0.64	0.17-1.63
Female genital organs	0	*	0.00-25.35	4	1.38	0.38-3.54	1	0.27	0.01-1.50
Cervix	0	*	0.00-168.65	1	2.68	0.07-14.89	1	1.96	0.05-10.92
Other	0	*	0.00-46.40	3	1.89	0.39-5.52	0	*	0.00-1.81
Male genital organs	3	1.93	0.40-5.65	10	0.99	0.47-1.82	4	0.35	0.09-0.89
Prostate	3	2.10	0.43-6.13	9	0.93	0.42-1.76	4	0.36	0.10-0.92
Other	0	*	0.00-30.13	1	2.33	0.06-12.96	0	*	0.00-8.96
Urinary Organs	0	*	0.00-3.25	5	0.79	0.26-1.85	6	0.89	0.32-1.93
Kidney	0	*	0.00-4.92	2	0.53	0.06-1.90	2	0.50	0.06-1.81
Bladder and other urinary organs	0	*	0.00-9.57	3	1.20	0.25-3.50	4	1.44	0.39-3.67
Other and unspecified sites	0	*	0.00-2.3	7	1.00	0.40-2.06	5	0.68	0.39-3.67

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Skin	0	*	0.00-8.37	2	1.09	0.13-3.95	2	1.05	0.13-3.79
Central nervous system	0	*	0.00-3.81	5	1.16	0.37-2.70	2	0.44	0.05-1.59
Thyroid gland	0	*	0.00-42.96	0	*	0.00-8.45	1	2.16	0.05-12.00
Lymphatic and hematopoietic tissue	1	0.37	0.01-2.08	14	0.96	0.53-1.61	14	0.90	0.49-1.51
Lymphosarcoma and reticulosarcoma	0	*	0.00-19.45	2	1.80	0.22-6.51	1	0.84	0.02-4.65
Hodgkin's disease	0	*	0.00-18.69	0	*	0.00-4.21	1	1.09	0.03-6.04
Leukemia and aleukemia	1	0.96	0.02-5.34	7	1.27	0.51-2.61	4	0.68	0.18-1.73
Other	0	*	0.00-2.96	5	0.71	0.23-1.66	8	1.07	0.46-2.10
All other cancers	2	1.23	0.15-4.45	11	1.22	0.61-2.18	11	1.14	0.57-2.04
Benign neoplasms	0	*	0.00-15.83	2	1.44	0.17-5.19	1	0.67	0.02-3.73
<b>Non-malignant causes</b>									
Tuberculosis	0	*	0.00-104.1	0	*	0.00-16.89	1	4.28	0.11-23.80
Diabetes mellitus	0	*	0.00-2.39	18	2.03	1.20-3.21	5	0.52	0.17-1.22

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Cerebrovascular disease	5	1.59	0.52-3.72	17	0.70	0.41-1.13	13	0.48	0.26-0.82
All heart disease	21	0.87	0.54-1.34	110	0.75	0.62-0.90	125	0.79	0.66-0.94
Rheumatic heart disease		*	0.00-13.12	2	1.02	0.12-3.68	4	1.86	0.51-4.77
Ischemic heart disease	16	0.84	0.48-1.36	93	0.81	0.65-0.99	92	0.74	0.60-0.91
Chronic disease of endocardium	0	*	0.00-4.55	7	1.00	0.40-2.06	4	0.51	0.14-1.31
Hypertension with heart disease	1	3.27	0.08-18.17	2	0.97	0.12-3.49	2	0.90	0.11-3.27
Other	4	1.15	0.31-2.94	6	0.30	0.11-0.64	23	1.05	0.66-4.57
Hypertension without heart disease	1	3.73	0.09-20.71	3	1.58	0.33-4.62	2	0.98	0.12-3.55
Diseases of respiratory system	3	0.67	0.14-1.95	19	0.58	0.35-0.91	28	0.76	0.51-1.10
Influenza and pneumonia	0	*	0.00-3.05	7	0.71	0.29-1.47	5	0.43	0.14-1.02
Bronchitis	0	*	0.00-44.33	1	1.53	0.04-8.47	0.00	*	0.00-4.93
Emphysema	0	*	0.00-7.02	2	0.55	0.07-1.99	1	0.25	0.01-1.38
Asthma	1	7.32	0.19-40.68	0	*	0.00-3.93	2	1.93	0.23-6.97
Other	2	0.79	0.10-2.84	9	0.51	0.23-0.97	20	1.03	0.63-1.59

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Ulcer of stomach	0	*	0.00-18.56	1	0.74	0.02-4.13	0	*	0.00-2.50
Cirrhosis of the liver	0	*	0.00-2.21	6	0.76	0.28-1.65	7	0.85	0.34-1.75
Nephritis and nephrosis	2	5.22	0.63-18.85	2	0.71	0.09-2.56	3	0.94	0.19-2.75
Accidents	8	1.16	0.50-2.28	23	0.94	0.59-1.41	18	0.74	0.44-1.17
Motor vehicle accidents	4	1.12	0.31-2.87	12	1.06	0.55-1.86	11	1.01	0.50-1.81
Other	4	1.2	0.33-3.06	11	0.83	0.41-1.48	7	0.52	0.21-1.07
Violence	6	1.65	0.60-3.59	8	0.69	0.30-1.36	8	0.69	0.30-1.37
Suicides	5	1.69	0.55-3.94	8	0.84	0.36-1.65	4	0.42	0.11-1.08
Homicides and other	1	1.49	0.04-8.26	0	*	0.00-1.81	4	1.98	0.54-5.05
All other causes	3	0.37	0.08-1.09	40	0.78	0.56-7.07	52	0.94	0.70-1.23

a: Cause not listed if not observed in entire cohort

b: Reference rates from state of Minnesota

c: All breast cancers observed in female employees

\* SMR not estimable in cells with 0 observed deaths.