

## *Supplementary Materials for*

# Italian pool of asbestos workers cohorts: asbestos related mortality by industrial sector and cumulative exposure

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**Supplementary table 1 Italian pool of asbestos workers cohorts. Description of the cohorts.**

N	Ref.	Industrial activity	Company or cohort name	Town	Asbestos type used	Period of activity	Asbestos used from:	N. in the study
1	14	Asbestos Cement	<b>Sacelit</b>	Senigallia	Chrysotile, crocidolite, amosite	1948-1984	1948	589
2	8	Asbestos Cement	<b>Eternit</b>	Casale Monferrato	Chrysotile, crocidolite	1907 - 1986	1907	3366
3	5	Asbestos Cement	<b>SACA</b>	Cavagnolo	Chrysotile, crocidolite, amosite	1948 - 1982	1948	812
4	12	Asbestos Cement	<b>Fibronit</b>	Broni	Chrysotile, crocidolite, amosite	1932 - 1993	1932	1333
5	2	Asbestos Cement	<b>Edilit</b>	Vigodarzere	Chrysotile, crocidolite	1961 - active	1947	539
6		Asbestos Cement	<b>Baracelit</b>	Bibbiena	Chrys. from 1945; Mixed from 1963	1943 - active	1945	725
7	15	Asbestos Cement	<b>Fibronit</b>	Avenza	Mixed fibres	1940-1983	1935	226
8		Asbestos Cement	<b>Veronit</b>	Livorno	Mixed fibres	1930-1985	1950	157
9		Asbestos Cement	<b>Cemamit</b>	Ferentino	Chrysotile, crocidolite	1963-1984	1963	81
10	7	Asbestos Cement	<b>Artclit</b>	Cadelbosco Sopra	Chrysotile, crocidolite	1965-1987	1965	50
11	7	Asbestos Cement	<b>Cemental</b>	Correggio	Chrysotile, crocidolite	1952-1989	1952	548
12	7	Asbestos Cement	<b>Cemiant</b>	Cadelbosco Sopra	Chrysotile	1968 - 1991	1968	103
13	7	Asbestos Cement	<b>ICAR Eternit</b>	Rubiera	Chrysotile, crocidolite	1961 - 1992	1961	553
14	7	Asbestos Cement	<b>Fibrotubi</b>	Bagnolo in Piano	Chrysotile, crocidolite	1957 - 1993	1957	284
15	7	Asbestos Cement	<b>Itamiant</b>	Castelnuovo Sotto	Chrysotile, crocidolite	1955 - 1993	1955	1187
16	7	Asbestos Cement	<b>Maranit</b>	Poggio Renatico	Chrysotile, crocidolite	1962- 1993	1962	201
17	7	Asbestos Cement	<b>Sidercam</b>	Boretto	Chrysotile, crocidolite	1969 - 1993	1969	128
18	7	Asbestos Cement	<b>Superlit</b>	Novi di Modena	Chrysotile, crocidolite	1954 - 1993	1954	175
19	7	Asbestos Cement	<b>Uprocem</b>	Boretto	Chrysotile, crocidolite	1973 - 1993	1973	58
20	1	Asbestos Cement	<b>Fibronit</b>	Bari	Chrysotile, crocidolite, amosite	1934 - 1989	1934	413
21	11	Asbestos Cement	<b>Eternit</b>	Napoli	Chrysotile, crocidolite	1950 - 1986	1939	1447
22		Shipyard (merchant ships)	<b>Fincantieri</b>	Venezia	Mixed fibres	1917 - active	1950	4378
23		Shipyard	<b>Cantieri Navali Apuania</b>	Massa	Mixed fibres	1945 - active	1945	742
24		Rolling stock maint.	<b>Officina Grandi Riparazioni FS</b>	Vicenza	Crocidolite	1914 - active	1960	1628
25	16, 17	Rolling stock maint.	<b>Officine di Cittadella</b>	Cittadella	Crocidolite	1946 - 2003	1964	1216
26	16, 17	Rolling stock maint.	<b>Officine Meccaniche della Stanga</b>	Padova	Crocidolite	1920- 2003	1946	2016
27		Rolling stock const.& maint.	<b>FERVET</b>	Castelfranco Veneto	Crocidolite	1908 - 2013	1960	947
28		Rolling stock maint.	<b>Officina Grandi Riparazioni FS</b>	Firenze	Crocidolite	1930-2005	1957	998
29		Rolling stock maint.	<b>FERVET</b>	Viareggio	Chrysotile	1930-1989	1956	841
30		Rolling stock maint	<b>Italian Railways</b>	Lazio region	Mixed fibres	Early 1900 - Active		8395
31	13	Rolling stock constr & maint	<b>Casaralta</b>	Bologna	Mixed fibres	1919-1998	1960	1843
32	6	Rolling stock constr.	<b>Breda</b>	Pistoia	Mixed fibres	1930 - active	1956	3535
33		Rolling stock constr.	<b>SACFEM</b>	Arezzo	Crocidolite	1945-1983	1956	681
34		Rolling stock constr.	<b>Officine Gallinari</b>	Reggio Emilia	Chrysotile, crocidolite	1957-1991/1992	1957	1680
35		Dockyard and harbour	<b>Compagnia lavoratori Portuali</b>	Venezia	Mixed fibres	1929 - active	1966	1939
36		Ship furniture	<b>Signani</b>	Aulla	Amosite	1945-1994	1945	1170
37		Insulation	<b>Siri</b>	Sesto Fiorentino	Chrysotile, crocidolite, amosite	1951-1989	1951	205
38		Glassworks	<b>Saivo</b>	Firenze	Chrysotile	1936-1995	1936	1317
39		Glassworks	<b>Borma</b>	Livorno	Mixed fibres	1940-1992	1940	2410
40	3	Industrial ovens constr.	<b>Santa Lucia</b>	Pistoia	Chrysotile, crocidolite	1962 - active	1962	217
41	18	Asphalt rolls production	<b>Derbit</b>	Castenaso	Chrysotile	1964-1997	1964	413
42	9	Italian miners in Wittenoom	<b>Australian Blue Asbestos (ABA) -- Italian workers returned to Italy</b>	Wittenoom (Australia)	Crocidolite	1943-1966	1943	300
43	4	Wives of AC workers Workers in multiple cohorts	<b>Wives of Eternit workers</b>	Casale Monferrato	Chrysotile, crocidolite	1907 - 1986	1907	1777 178

**References for the studies included in the pooled cohort (Supplementary Table 1)**

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**Supplementary table 2 Italian pool of asbestos workers cohorts. Exposure indexes by industrial sector and period of activity, limited to the sectors with 2 or more cohorts under study.**

	Year_cl	AEI index (f/ml)			Fibre-type-weighted-AEI (chrysotile equivalent f/ml)		
		Minimum	Maximum	Median	Minimum	Maximum	Median
Asbestos	<1945	2.1	5.5	3.9	2.1	78.7	52.4
Cement	1945-9	2.1	5.5	3.9	2.1	109.7	52.4
	1950-4	2.1	6.2	3.9	2.1	109.7	50.1
	1955-9	2.1	6.2	3.9	2.1	109.7	50.1
	1960-4	0.8	6.2	3.9	1.4	124.8	49.5
	1965-9	0.8	6.1	3.9	1.4	131.3	49.5
	1970-4	0.8	6.1	3.9	1.4	131.3	49.5
	1975-9	0.2	6.1	0.9	0.4	124.8	10.7
	1980-4	<0.1	2.0	0.4	<0.1	55.9	4.3
	1985-9	<0.1	2.0	<0.1	<0.1	16.1	0.2
	1990-3	<0.1	0.2	<0.1	<0.1	0.4	<0.1
Rolling stock	<=1954	0.0	0.0	0.0	0.0	0.0	0.0
	1955-9	0.0	1.4	0.0	0.0	92.4	0.0
	1960-4	0.0	1.8	0.0	0.0	119.9	1.2
	1965-9	0.0	1.8	0.2	0.0	119.9	15.3
	1970-4	0.0	1.8	0.6	0.0	119.9	30.9
	1975-9	0.0	1.7	0.6	0.0	106.4	34.8
	1980-4	0.0	1.0	0.0	0.0	64.7	1.8
	1985-9	0.0	0.0	0.0	0.0	2.0	0.2
	1990-3	0.0	0.0	0.0	0.0	0.2	0.0
Glassworks	<1945	0.0	1.6	0.0	0.0	36.4	0.0
	1945-9	0.0	1.6	0.8	0.0	36.4	18.2
	1950-69	0.0	1.6	0.8	0.0	25.4	12.7
	1970-93	0.0	0.3	0.1	0.0	10.3	5.2
Shipyards	<1945	0.0	0.0	0.0	0.0	0.0	0.0
	1945-9	0.0	0.1	0.0	0.0	2.1	0.0
	1950-4	0.0	0.1	0.1	0.0	2.3	2.1
	1955-9	0.1	1.8	0.1	2.1	51.4	2.2
	1960-4	0.1	5.6	0.4	2.1	159.2	12.0
	1965-9	0.1	1.6	1.0	2.3	45.5	28.8
	1970-4	1.6	1.8	1.7	45.5	51.4	48.5
	1975-9	0.0	1.8	0.4	0.3	51.4	5.2
	1980-4	0.0	0.4	0.0	0.0	4.8	0.0
	1985-93	0.0	0.0	0.0	0.0	0.1	0.0

**Supplementary table 3 Italian pool of asbestos workers cohorts. Tertiles of exposure indexes by industrial sector.**

	Fibre-type-weighted-CEI (chrysotile equivalent f/ml)		
	I	II	III
Asbestos Cement	<54.0	54.0-620.0	>620.0
Shipyards	<63	63-195.0	>195.0
Ship furniture	<25.78	25.78-106.65	>106.65
Rolling stock	<0.9	0.9-146.6	>146.6
Industrial ovens	<0.8	0.8-3.2	>3.2
Insulation	<71.3	71.3-492.9	>492.9
Dockyards	<5.30	5.30-6.33	>6.33
Glasswork	<0.13	0.13-156.82	>156.82

**Supplementary table 4 Italian pool of asbestos workers cohorts. Mortality by cause by industrial sector, men.** Observed deaths (OBS), Standardized Mortality Ratio (SMR), Lower and Upper limits of the 95% Confidence Interval.

CAUSE OF DEATH	Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles						TOTAL			
	<54.0		54.0-620.0		>620.0		LOWER	UPPER		
	OBS	SMR	OBS	SMR	OBS	SMR				
All causes	1038	114.7**	1919	115.6**	2634	132.2**	5591	122.6**	119.4	125.9
Malignant neoplasm (MN)	425	125.5**	765	130.7**	1152	173.2**	2342	147.4**	141.4	153.4
MN of the lip, oral cavity and pharynx	11	111.0	6	40.0*	12	66.4	29	67.5*	45.2	96.9
MN of the digestive organs (incl peritoneum)	121	104.8	217	109.1	301	130.6**	639	117.3**	108.4	126.7
MN Esophagus	7	103.0	13	118.0	19	135.0	39	122.3	87.0	167.2
MN of the stomach	38	135.8	45	88.8	53	87.0	136	97.4	81.7	115.2
MN Digestive tract	36	111.0	55	101.4	72	111.9	163	107.9	92.0	125.8
MN of the small intestine	1	154.1	2	195.3	3	264.3	6	213.7	78.4	465.1
MN of the colon	24	106.7	40	108.1	53	123.7	117	114.3	94.5	137.0
MN of the rectum	11	118.3	13	80.2	16	78.5	40	87.1	62.3	118.7
MN of the liver and intrahepatic bile ducts	17	80.3	33	84.0	52	121.2	102	98.7	80.5	119.8
MN Pancreas	15	91.5	28	111.2	15	55.9*	58	84.7	64.4	109.6
MN of the peritoneum	3	183.2	24	933.9**	75	2517.7**	102	1419.3**	1157.2	1722.9
MN other and ill-defined of digestive tract	2	37.8	14	151.5	8	74.6	24	95.0	60.9	141.4
MN of the respiratory organs	188	160.5*	375	180.5**	621	272.7**	1184	214.3**	202.2	226.8
MN nose and paranasal sinuses	0	---	1	167.4	0	---	1	58.9	1.5	328.0
MN of the larynx	13	165.1	19	124.3	18	96.4	50	119.5	88.7	157.6
MN of the lungs	136	130.0*	251	135.6**	433	215.9**	820	167.3**	156.0	179.1
MN of the pleura	36	1126.9*	100	2077.4**	169	2996.5**	305	2234.7**	1990.9	2500.1
MN genitourinary organs	44	111.7	84	111.7	82	86.9	210	100.5	87.4	115.0
MN of the prostate	14	84.4	36	105.7	43	93.3	93	96.1	77.6	117.8
MN Testis	0	---	0	---	0	---	0	---	0.0	178.3
MN of the bladder	17	133.0	36	138.8	29	90.4	82	115.8	92.1	143.8
MN of the kidney	12	132.6	12	86.2	10	67.0	34	89.7	62.1	125.4
MN Eye and nervous system	10	112.5	9	72.3	23	191.1**	42	125.9	90.7	170.1
MN Other and ill defined sites	2	116.5	2	56.1	2	44.8	6	61.5	22.6	134.0
MN secondary	2	250.5	4	304.3	4	332.2	10	301.5**	144.6	554.4
MN of unspecified site	14	157.1	19	130.1	31	185.7**	64	159.2**	122.6	203.3
Leukaemia and lymphoma	24	95.3	41	102.4	60	140.1*	125	115.7	96.3	137.9
Psychiatric diseases	9	94.2	10	74.9	21	132.2	40	103.1	73.7	140.4
Neurological diseases	12	61.2	23	68.7	25	62.9*	60	64.7**	49.3	83.2
Cardiovascular diseases	280	96.9	523	87.3**	641	83.3**	1444	87.1**	82.7	91.7
Ischemic Heart diseases	105	82.6*	204	80.5**	218	73.1**	527	77.6**	71.1	84.5
Miocardial infarction	61	79.5	116	76.7**	133	74.1**	310	76.1**	67.9	85.1
Respiratory diseases	46	93.3	210	188.5**	423	287.5**	679	220.6**	204.3	237.8
Bronchitis, emphysema, asthma	20	119.2	73	157.7**	57	88.7	150	117.8	99.7	138.3
Asbestosis	5	5003.5*	75	34069.3**	268	73218.5**	348	50721.7**	45531.8	56341.1
All Pneumoconioses (incl Asbestosis)	6	466.5*	81	3041.5**	293	6184.5**	380	4374.3**	3945.5	4837.0
Digestive diseases	59	113.7	100	94.9	117	94.1	276	98.0	86.8	110.3
Genitourinary diseases	9	89.5	14	62.4	30	110.0	53	88.7	66.4	116.0
Poorly specified causes	15	327.1*	19	184.7*	43	287.6**	77	258.2**	203.8	322.7
Accidents and violence	79	112.3	73	89.8	69	83.2	221	94.2	82.2	107.5
Unknown Causes	61		121		48		230			

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

CAUSE OF DEATH	4.2 Rolling stock - Men									
	Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles									
	<0.9		0.9-146.6		>146.6		TOTAL		LOWER	UPPER
	OBS	SMR	OBS	SMR	OBS	SMR	OBS	SMR		
All causes	1458	86.4**	2353	96.2	4057	96.1*	7868	94.2**	92.1	96.3
Malignant neoplasm (MN)	577	90.9*	873	101.4	1647	111.1**	3097	104.0*	100.4	107.7
MN of the lip, oral cavity and pharynx	12	61.8	11	44.9**	34	77.9	57	65.1**	49.3	84.4
MN of the digestive organs (incl peritoneum)	203	94.7	266	87.6*	509	97.1	978	93.8*	88.1	99.9
MN Esophagus	14	106.9	13	68.4	25	67.9	52	75.5*	56.4	99.0
MN of the stomach	56	105.4	76	90.0	132	91.3	264	93.6	82.6	105.6
MN Digestive tract	58	93.7	87	102.9	135	94.7	280	96.9	85.9	108.9
MN of the small intestine	1	95.9	1	65.0	5	202.7	7	138.7	55.7	285.7
MN of the colon	41	95.1	60	103.7	91	93.6	192	96.9	83.6	111.6
MN of the rectum	16	90.2	26	103.3	39	91.0	81	94.4	75.0	117.4
MN of the liver and intrahepatic bile ducts	33	91.6	35	73.0	81	93.7	149	87.4	74.0	102.6
MN Pancreas	25	78.0	30	73.2	80	118.8	135	96.2	80.6	113.8
MN of the peritoneum	5	167.7	2	49.4	17	258.4**	24	176.4*	113.0	262.4
MN other and ill-defined of digestive tract	7	85.4	19	143.7	17	71.9	43	95.5	69.1	128.6
MN of the respiratory organs	194	87.8	353	122.2**	660	131.2**	1207	119.2**	112.5	126.1
MN nose and paranasal sinuses	0	---	0	---	0	---	0	---	---	---
MN of the larynx	13	87.1	13	63.1	23	59.4**	49	66.0**	48.8	87.3
MN of the lungs	171	85.9*	276	106.8	507	113.1**	954	105.3	98.7	112.2
MN of the pleura	6	143.2	60	1017.4**	125	1328.1**	191	979.5**	845.5	1128.8
MN genitourinary organs	77	111.4	115	106.0	206	105.7	398	106.8	96.6	117.8
MN of the prostate	33	118.1	52	104.0	97	103.2	182	105.9	91.0	122.4
MN Testis	1	68.8	2	132.6	1	56.7	4	84.7	23.1	216.8
MN of the bladder	26	118.2	35	104.8	70	116.5	131	113.4	94.8	134.6
MN of the kidney	17	100.2	26	114.4	36	95.4	79	102.0	80.8	127.2
MN Eye and nervous system	16	88.7	21	107.3	37	129.3	74	111.7	87.7	140.3
MN Other and ill defined sites	3	84.2	3	57.1	5	54.3	11	61.0	30.5	109.2
MN secondary	0	---	3	147.5	2	59.6	5	70.9	23.0	165.5
MN of unspecified site	15	93.6	20	91.6	64	169.9**	99	131.1*	106.5	159.6
Leukaemia and lymphoma	41	83.7	67	109.0	90	91.6	198	94.9	82.1	109.0
Psychiatric diseases	11	68.3	26	105.9	41	98.6	78	94.9	75.0	118.4
Neurological diseases	22	64.6*	36	72.1*	82	92.4	140	81.1*	68.2	95.7
Cardiovascular diseases	422	78.0**	777	89.1**	1401	90.2**	2600	87.6**	84.3	91.1
Ischemic Heart diseases	178	73.9**	318	87.4*	594	92.9	1090	87.6**	82.5	93.0
Miocardial infarction	110	74.6**	195	91.1	336	89.7*	641	87.1**	80.5	94.1
Respiratory diseases	80	95.2	153	99.8	221	76.8**	454	86.5**	78.7	94.8
Bronchitis, emphysema, asthma	29	106.4	62	106.3	96	87.2	187	95.6	82.4	110.3
Asbestosis	0	---	3	3104.3**	3	1914.8**	6	1907.5**	700.0	4151.7
All Pneumoconioses (incl Asbestosis)	2	68.3	6	90.7	8	49.2*	16	62.0	35.4	100.7
Digestive diseases	58	58.0**	120	88.6	176	73.5**	354	74.5**	67.0	82.7
Genitourinary diseases	18	91.0	20	66.0	39	72.1*	77	73.9**	58.3	92.4
Poorly specified causes	19	165.3	23	133.5	40	136.9	82	141.5**	112.5	175.6
Accidents and violence	91	70.0**	140	91.3	178	85.8*	409	83.3**	75.5	91.8
Unknown Causes	75		87		47		209			

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

CAUSE OF DEATH	4.3 Shipyards - Men									
	Cumulative exposure (f/ml - y, adjusted for fibre type) teratiles									
		<63		63-195.0		>195.0		TOTAL		
	OBS	SMR	OBS	SMR	OBS	SMR	OBS	SMR	LOWER	UPPER
All causes	535	104.3	510	97.0	516	98.0	1561	99.7	94.8	104.8
Malignant neoplasm (MN)	212	103.6	212	103.4	246	115.9*	670	107.7	99.7	116.2
MN of the lip, oral cavity and pharynx	8	83.8	7	80.3	5	47.3	20	69.3	42.4	107.1
MN of the digestive organs (incl peritoneum)	58	84.0	74	105.4	69	96.3	201	95.3	82.6	109.4
MN Esophagus	6	82.2	6	91.7	8	100.9	20	91.8	56.1	141.8
MN of the stomach	4	30.8 **	17	115.1	11	89.2	32	79.8	54.6	112.6
MN Digestive tract	17	90.5	17	88.2	16	81.4	50	86.6	64.3	114.2
MN of the small intestine	0	---	0	---	0	---	0	---	---	---
MN of the colon	14	108.5	9	67.3	11	80.8	34	85.2	59.0	119.1
MN of the rectum	3	54.2	8	143.9	5	87.5	16	95.2	54.4	154.6
MN of the liver and intrahepatic bile ducts	15	107.5	18	135.3	12	80.6	45	106.8	77.9	142.9
MN Pancreas	11	101.4	10	95.0	13	112.4	34	103.2	71.5	144.2
MN of the peritoneum	0	---	0	---	1	116.2	1	38.0	0.9	211.6
MN other and ill-defined of digestive tract	2	92.7	2	74.0	3	141.5	7	100.3	40.3	206.6
MN of the respiratory organs	89	121.5	83	117.1	118	156.1**	290	132.0**	117.2	148.1
MN nose and paranasal sinuses	1	369.0	0	---	1	364.1	2	245.9	29.8	888.3
MN of the larynx	7	115.7	3	52.6	5	79.7	15	83.2	46.6	137.2
MN of the lungs	73	113.0	64	102.2	92	138.0**	229	118.1*	103.3	134.4
MN of the pleura	7	425.3**	16	983.9**	19	1107.5**	42	842.0**	606.9	1138.2
MN genitourinary organs	22	106.7	18	81.6	22	104.6	62	97.3	74.6	124.7
MN of the prostate	4	46.3	5	53.8	10	113.1	19	71.0	42.7	110.8
MN Testis	1	273.6	0	---	0	---	1	98.7	2.5	550.0
MN of the bladder	9	154.9	8	122.8	8	139.6	25	138.5	89.6	204.4
MN of the kidney	8	141.7	5	87.3	4	66.7	17	97.9	57.0	156.7
MN Eye and nervous system	2	42.5	7	139.0	2	40.6	11	75.0	37.4	134.2
MN Other and ill defined sites	0	---	1	91.2	0	---	1	30.1	0.8	167.8
MN secondary	0	---	0	---	1	168.2	1	58.5	1.5	326.0
MN of unspecified site	7	136.4	4	76.6	10	182.5	21	132.6	82.1	202.7
Leukaemia and lymphoma	19	134.1	14	96.4	12	82.9	45	104.2	76.0	139.5
Psychiatric diseases	1	19.3	4	76.0	4	65.8	9	54.5	24.9	103.4
Neurological diseases	12	115.4	12	108.0	4	37.1*	28	86.7	57.6	125.3
Cardiovascular diseases	48	95.3	119	72.8**	130	81.5*	397	83.0**	75.0	91.6
Ischemic Heart diseases	58	81.9	48	66.1**	61	82.9	167	77.0**	65.7	89.6
Miocardial infarction	36	76.7	28	60.6**	36	74.1	100	70.6**	57.4	85.8
Respiratory diseases	19	77.9	20	73.9	19	75.6	58	75.7**	57.5	97.9
Bronchitis, emphysema, asthma	8	104.8	7	82.6	10	140.6	25	107.7	69.7	159.0
Asbestosis	0	---	1	5232.0*	0	---	1	2874.3	71.9	16015.5
All Pneumoconioses (incl Asbestosis)	1	105.7	4	325.4	1	124.4	6	201.4	73.9	438.3
Digestive diseases	41	115.4	37	109.4	36	99.3	114	107.9	89.0	129.7
Genitourinary diseases	2	40.1	5	92.3	3	59.3	10	64.7	31.0	118.9
Poorly specified causes	10	397.2**	6	214.2	10	404.8**	26	333.8**	218.1	489.2
Accidents and violence	26	67.3*	31	78.2	33	88.3	90	77.8*	62.6	95.6
Unknown Causes	39		40		13		92			

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

CAUSE OF DEATH	Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles									
	<25.78		25.78-106.65		>106.65		TOTAL			
	OBS	SMR	OBS	SMR	OBS	SMR	OBS	SMR	LOWER	UPPER
All causes	146	137.1**	119	89.5	154	118.3 *	419	113.4 *	102.8	124.8
Malignant neoplasm (MN)	52	124.3	46	94.7	53	105.9	151	107.5	91.1	126.1
MN of the lip, oral cavity and pharynx	3	285.3	1	86.4	2	163.5	6	174.8	64.1	380.4
MN of the digestive organs (incl peritoneum)	14	93.3	13	74.6	13	71.5	40	79.0	56.5	107.6
MN Esophagus	0	---	1	104.1	0	---	1	34.7	0.9	193.4
MN of the stomach	2	43.7	4	76.5	4	70.5	10	64.6	31.0	118.8
MN Digestive tract	3	75.6	3	63.5	2	41.4	8	59.2	25.5	116.6
MN of the small intestine	0	---	0	---	0	---	0	---	---	---
MN of the colon	3	109.9	2	60.9	0	---	5	53.6	17.4	125.1
MN of the rectum	0	---	1	73.9	2	140.2	3	76.0	15.7	222.2
MN of the liver and intrahepatic bile ducts	5	218.6	0	---	4	147.6	9	118.1	54.0	224.1
MN Pancreas	1	53.9	2	94.1	3	136.4	6	97.1	35.6	211.4
MN of the peritoneum	1	469.3	1	421.2	0	---	2	286.2	34.6	1034.0
MN other and ill-defined of digestive tract	2	240.5	2	194.7	0	---	4	140.6	38.3	360.1
MN of the respiratory organs	21	147.8	22	138.2	24	143.5	67	143.0 **	110.8	181.6
MN nose and paranasal sinuses	0	---	2	2962.3 **	1	1410.8	3	1528.3 **	315.3	4466.1
MN of the larynx	1	95.1	1	86.7	1	80.4	3	87.0	18.0	254.2
MN of the lungs	19	150.5	17	120.0	15	101.0	51	122.5	91.2	161.0
MN of the pleura	1	305.5	2	536.7	6	1541.9 **	9	826.3 **	377.8	1568.7
MN genitourinary organs	5	100.6	4	62.7	7	114.1	16	91.5	52.3	148.6
MN of the prostate	3	144.0	1	34.5	4	149.8	8	104.5	45.1	206.0
MN Testis	0	---	0	---	0	---	0	---	0.0	1538.3
MN of the bladder	0	---	1	48.2	2	97.7	3	51.7	10.7	151.1
MN of the kidney	2	183.6	2	156.9	1	78.4	5	137.4	44.6	320.7
MN Eye and nervous system	1	94.6	1	86.6	1	82.8	3	87.7	18.1	256.3
MN Other and ill defined sites	0	---	0	---	0	---	0	---	---	---
MN secondary	0	---	0	---	0	---	0	---	---	---
MN of unspecified site	0	---	1	81.7	1	84.9	2	58.6	7.1	211.9
Leukaemia and lymphoma	6	202.4	4	115.4	4	114.1	14	140.9	77.0	236.4
Psychiatric diseases	0	---	1	99.4	0	---	1	42.7	1.1	238.2
Neurological diseases	1	45.2	1	33.2	1	37.4	3	38.0	7.8	111.0
Cardiovascular diseases	29	82.5	38	81.3	35	78.6	102	80.7 *	65.8	98.0
Ischemic Heart diseases	10	67.9	14	75.7	16	88.7	40	78.1	55.8	106.3
Miocardial infarction	6	66.7	9	87.0	13	120.3	28	92.9	61.7	134.2
Respiratory diseases	15	246.7**	8	92.4	12	150.7	35	154.2 *	107.4	214.4
Bronchitis, emphysema, asthma	5	206.1	4	128.6	6	185.5	15	171.0	95.7	282.1
Asbestosis	0	---	1	8025.7 *	2	17663.6 **	3	9075.7 **	1872.6	26522.2
All Pneumoconioses (incl Asbestosis)	7	1456.6**	2	328.7	5	799.2 **	14	816.5 **	446.4	1370.0
Digestive diseases	10	174.5	4	60.3	10	145.1	24	124.6	79.9	185.5
Genitourinary diseases	2	165.7	2	117.6	3	189.1	7	155.7	62.6	320.9
Poorly specified causes	0	---	0	---	5	520.4 **	5	176.7	57.4	412.3
Accidents and violence	11	160.1	3	38.5	5	65.3	19	85.2	51.3	133.0
Unknown Causes	22		1		24		57			

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL



4.5 Glassworks - Men		Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles								TOTAL	
CAUSE OF DEATH	<0.13		0.13-156.82		>156.82		OBS	SMR	LOWER	UPPER	
	OBS	SMR	OBS	SMR	OBS	SMR					
All causes	483	93.0	406	118.7**	742	108.7*	1631	105.6*	100.5	110.9	
Malignant neoplasm (MN)	145	80.7**	127	102.9	264	115.5*	536	100.8	92.5	109.7	
MN of the lip, oral cavity and pharynx	1	26.1	4	144.2	5	106.2	10	88.4	42.4	162.5	
MN of the digestive organs (incl peritoneum)	58	86.9	40	88.6	85	97.5	183	91.9	79.1	106.3	
MN Esophagus	4	111.5	3	121.5	2	42.8	9	83.9	38.3	159.2	
MN of the stomach	24	109.5	6	41.4*	21	69.5	51	76.5	57.0	100.6	
MN Digestive tract	11	62.1	10	83.6	27	117.8	48	91.2	67.3	121.0	
MN of the small intestine	0	---	0	---	0	---	0	---	---	---	
MN of the colon	8	66.0	7	85.2	16	103.2	31	86.5	58.8	122.7	
MN of the rectum	3	56.6	3	85.0	11	156.3	17	107.2	62.4	171.6	
MN of the liver and intrahepatic bile ducts	7	72.9	11	162.6	15	123.0	33	115.5	79.5	162.2	
MN Pancreas	7	95.1	4	78.3	13	145.0	24	111.9	71.7	166.5	
MN of the peritoneum	0	---	0	---	2	186.3	2	79.3	9.6	286.3	
MN other and ill-defined of digestive tract	3	77.9	4	158.7	5	104.2	12	107.5	55.5	187.7	
MN of the respiratory organs	47	81.6	52	127.2	99	137.4**	198	116.1*	100.5	133.5	
MN nose and paranasal sinuses	0	---	0	---	0	---	0	---	---	---	
MN of the larynx	2	45.7	3	98.2	8	141.8	13	99.4	52.9	170.0	
MN of the lungs	43	84.0	46	126.3	81	126.5*	170	112.1	95.9	130.3	
MN of the pleura	1	82.4	3	359.1	9	643.4**	13	377.1**	200.8	644.8	
MN genitourinary organs	21	82.9	12	73.2	39	117.6	72	96.1	75.2	121.1	
MN of the prostate	9	73.4	5	66.6	18	108.9	32	88.2	60.3	124.5	
MN Testis	0	---	0	---	0	---	0	---	---	---	
MN of the bladder	9	109.2	5	91.1	12	111.5	26	106.2	69.4	155.6	
MN of the kidney	3	67.8	2	64.6	9	166.7	14	108.4	59.2	181.8	
MN Eye and nervous system	2	54.9	2	75.6	4	95.6	8	76.4	33.0	150.5	
MN Other and ill defined sites	0	---	1	131.4	1	62.7	2	57.2	6.9	206.7	
MN secondary	0	---	0	---	0	---	0	---	---	---	
MN of unspecified site	3	69.5	4	136.3	9	173.2	16	128.5	73.5	208.7	
Leukaemia and lymphoma	9	75.0	8	96.2	17	117.0	34	97.5	67.6	136.3	
Psychiatric diseases	3	84.5	1	46.9	3	75.1	7	72.3	29.1	149.0	
Neurological diseases	12	107.7	5	68.4	14	101.6	31	96.2	65.4	136.6	
Cardiovascular diseases	59	80.8**	120	96.6	273	101.2	552	93.4	85.8	101.6	
Ischemic Heart diseases	64	85.6	52	105.8	121	121.5*	237	106.1	93.0	120.5	
Miocardial infarction	36	87.3	25	89.8	65	119.2	126	101.9	84.9	121.4	
Respiratory diseases	40	105.2	30	128.1	47	89.3	117	102.5	84.8	122.9	
Bronchitis, emphysema, asthma	15	98.4	16	178.9*	19	84.6	50	107.2	79.6	141.3	
Asbestosis	0	---	0	---	0	---	0	---	---	---	
All Pneumoconioses (incl Asbestosis)	11	377.7**	0	---	14	343.9**	25	285.6**	184.8	421.6	
Digestive diseases	10	38.7**	34	193.3**	34	99.6	78	100.6	79.5	125.5	
Genitourinary diseases	7	96.1	4	86.0	9	88.9	20	90.6	55.4	140.0	
Poorly specified causes	2	40.2	10	297.4**	5	67.1	17	107.7	62.7	172.4	
Accidents and violence	20	82.3	13	75.8	28	100.2	61	87.9	67.2	112.9	
Unknown Causes	67		43		21		131				

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

CAUSE OF DEATH	4.6 Dockyards - Men									
	Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles									
	<5.30		5.30-6.33			>6.33		TOTAL		
	OBS	SMR	OBS	SMR	OBS	SMR	OBS	SMR	LOWER	UPPER
All causes	285	104.6	230	114.3*	359	110.5	874	109.4**	102.3	116.9
Malignant neoplasm (MN)	102	117.0	120	141.6**	172	139.1**	394	133.3**	120.5	147.1
MN of the lip, oral cavity and pharynx	7	166.5	3	70.8	8	150.6	18	130.9	77.6	206.8
MN of the digestive organs (incl peritoneum)	26	85.5	31	107.2	45	110.5	102	102.0	83.1	123.8
MN Esophagus	3	92.7	3	92.2	4	91.0	10	91.9	44.0	168.9
MN of the stomach	6	90.5	6	121.8	7	88.0	19	97.4	58.6	152.1
MN Digestive tract	7	82.7	7	89.5	14	127.7	28	102.8	68.3	148.5
MN of the small intestine	0	---	0	---	1	531.4	1	207.5	5.2	1156.2
MN of the colon	5	89.6	4	74.6	9	121.0	18	97.9	58.0	154.8
MN of the rectum	2	73.1	3	129.8	4	120.0	9	107.4	49.1	203.9
MN of the liver and intrahepatic bile ducts	6	110.3	8	131.4	14	168.4	28	141.1	93.8	204.0
MN Pancreas	3	67.3	6	126.4	6	99.4	15	98.4	55.1	162.4
MN of the peritoneum	1	264.5	0	---	0	---	1	82.7	2.1	460.9
MN other and ill-defined of digestive tract	0	---	0	---	0	---	0	---	---	---
MN of the respiratory organs	43	151.4*	68	223.7**	74	159.1**	185	175.7**	151.3	202.9
MN nose and paranasal sinuses	1	946.1	0	---	0	---	1	280.3	7.0	1561.6
MN of the larynx	1	37.9	3	119.2	4	103.1	8	88.6	38.2	174.5
MN of the lungs	35	141.5	51	190.5**	63	152.8**	149	160.7**	135.9	188.7
MN of the pleura	6	985.1**	11	1485.2**	6	717.2**	23	1052.0**	666.9	1578.5
MN genitourinary organs	6	57.5	8	97.1	20	144.9	34	104.7	72.5	146.3
MN of the prostate	2	39.8	5	145.1	6	94.0	13	87.5	46.6	149.6
MN Testis	0	---	0	---	0	---	0	---	---	---
MN of the bladder	3	104.4	3	134.2	11	276.2**	17	186.9*	108.9	299.3
MN of the kidney	1	44.9	0	---	3	93.3	4	51.0	13.9	130.7
MN Eye and nervous system	2	101.3	2	104.1	1	48.4	5	83.8	27.2	195.7
MN Other and ill defined sites	0	---	0	---	1	128.1	1	52.7	1.3	293.5
MN secondary	1	422.5	0	---	0	---	1	131.6	3.3	733.2
MN of unspecified site	4	194.0	0	---	9	281.3*	13	175.9	93.6	300.7
Leukaemia and lymphoma	9	147.9	6	106.1	9	116.3	24	123.2	78.9	183.3
Psychiatric diseases	2	84.4	1	50.6	1	26.7	4	49.5	13.5	126.6
Neurological diseases	2	43.4	1	24.4	6	91.9	9	59.1	27.0	112.1
Cardiovascular diseases	96	94.7	54	90.4	92	83.2	242	89.1	78.2	101.1
Ischemic Heart diseases	39	98.4	18	64.8	39	79.2	96	82.3	66.7	100.5
Miocardial infarction	18	75.5	8	42.9**	18	56.9*	44	59.4**	43.1	79.7
Respiratory diseases	12	67.1	8	90.2	15	77.8	35	76.0	52.9	105.7
Bronchitis, emphysema, asthma	4	52.4	1	38.6	3	44.7	8	47.2*	20.4	93.1
Asbestosis	0	---	0	---	0	---	0	---	---	---
All Pneumoconioses (incl Asbestosis)	0	---	1	380.6	0	---	1	63.3	1.6	353.0
Digestive diseases	19	103.5	16	113.7	33	147.6*	68	124.1	96.4	157.3
Genitourinary diseases	3	89.7	0	---	4	115.6	7	80.5	32.3	165.8
Poorly specified causes	3	126.2	6	689.6**	3	189.7	12	248.5**	128.4	434.2
Accidents and violence	13	65.0	11	83.7	4	25.0**	28	57.0**	37.8	82.3
Unknown Causes	18		7		11		36			

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

CAUSE OF DEATH	4.7 Insulation - Men									
	Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles									
		<71.3		71.3-492.9		>492.9		TOTAL		
	OBS	SMR	OBS	SMR	OBS	SMR	OBS	SMR	LOWER	UPPER
All causes	36	162.2**	27	169.2*	14	193.2*	77	169.6**	133.8	212.0
Malignant neoplasm (MN)	9	102.3	11	167.9	8	250.9*	28	151.0*	100.4	218.3
MN of the lip, oral cavity and pharynx	1	405.6	0	---	0	---	1	198.5	5.0	1105.9
MN of the digestive organs (incl peritoneum)	0	---	5	216.8	2	181.1	7	107.5	43.2	221.5
MN Esophagus	0	---	1	726.5	0	---	1	256.8	6.4	1430.9
MN of the stomach	0	---	1	146.4	1	329.5	2	106.0	12.8	383.1
MN Digestive tract	0	---	2	326.2	0	---	2	114.4	13.8	413.2
MN of the small intestine	0	---	0	---	0	---	0	---	---	---
MN of the colon	0	---	2	470.7	0	---	2	164.8	19.9	595.2
MN of the rectum	0	---	0	---	0	---	0	---	---	---
MN of the liver and intrahepatic bile ducts	0	---	0	---	1	546.1	1	98.1	2.5	546.6
MN Pancreas	0	---	0	---	0	---	0	---	0.0	433.1
MN of the peritoneum	0	---	1	2931.5	0	---	1	1027.4	25.7	5724.8
MN other and ill-defined of digestive tract	0	---	0	---	0	---	0	---	---	---
MN of the respiratory organs	4	134.1	5	218.8	5	437.8*	14	218.4*	119.4	366.4
MN nose and paranasal sinuses	1	6780.1*	2	20582.7**	0	---	3	10179.5**	2100.4	29747.9
MN of the larynx	0	---	0	---	0	---	0	---	---	---
MN of the lungs	2	75.7	3	147.7	3	294.4	8	140.6	60.7	277.0
MN of the pleura	1	1319.9	0	---	2	7182.5**	3	1921.2**	396.4	5614.5
MN genitourinary organs	3	314.1	0	---	0	---	3	148.9	30.7	435.1
MN of the prostate	0	---	0	---	0	---	0	---	---	---
MN Testis	0	---	0	---	0	---	0	---	---	---
MN of the bladder	2	627.3	0	---	0	---	2	290.1	35.1	1047.9
MN of the kidney	1	430.3	0	---	0	---	1	203.7	5.1	1135.2
MN Eye and nervous system	0	---	0	---	0	---	0	---	---	---
MN Other and ill defined sites	0	---	0	---	0	---	0	---	---	---
MN secondary	0	---	0	---	0	---	0	---	---	---
MN of unspecified site	1	473.7	0	---	0	---	1	224.7	5.6	1252.1
Leukaemia and lymphoma	0	---	1	209.0	1	436.1	2	145.1	17.6	524.1
Psychiatric diseases	0	---	0	---	0	---	0	---	---	---
Neurological diseases	0	---	1	298.2	0	---	1	104.1	2.6	580.2
Cardiovascular diseases	11	161.4	8	163.8	2	93.1	21	151.7	93.9	231.8
Ischemic Heart diseases	3	103.2	5	229.0	0	---	8	131.6	56.8	259.4
Miocardial infarction	3	164.8	4	287.4	0	---	7	183.0	73.6	377.0
Respiratory diseases	2	178.9	1	123.2	1	289.2	4	175.8	47.9	450.1
Bronchitis, emphysema, asthma	1	253.7	1	347.7	0	---	2	253.6	30.7	916.2
Asbestosis	0	---	0	---	1	127242.7**	1	21494.3**	537.4	119766.1
All Pneumoconioses (incl Asbestosis)	0	---	0	---	1	4313.1*	1	612.3	15.3	3411.6
Digestive diseases	1	82.1	2	220.0	2	507.2	5	198.3	64.4	462.7
Genitourinary diseases	2	825.4	0	---	0	---	2	410.4	49.7	1482.6
Poorly specified causes	3	1844.6**	1	1050.4	0	---	4	1369.9**	373.3	3507.6
Accidents and violence	5	269.1	0	---	1	229.2	6	173.1	63.5	376.8
Unknown Causes	3	---	2	---	0	---	5	---	---	---

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

CAUSE OF DEATH	4.8 Industrial ovens - Men									
	Cumulative exposure (f/ml - y, adjusted for fibre type) textiles									
		<0.8		0.8-3.2		>3.2		TOTAL		
	OBS	SMR	OBS	SMR	OBS	SMR	OBS	SMR	LOWER	UPPER
All causes	9	113.6	9	104.2	12	100.6	30	105.3	71.1	150.3
Malignant neoplasm (MN)	4	124.9	1	30.1	8	156.4	13	111.7	59.5	190.9
MN of the lip, oral cavity and pharynx	0	---	0	---	0	---	0	---	---	---
MN of the digestive organs (incl peritoneum)	1	92.5	0	---	2	114.3	3	75.3	15.5	220.1
MN Esophagus	0	---	0	---	1	958.7	1	413.1	10.3	2301.7
MN of the stomach	1	366.8	0	---	0	---	1	95.2	2.4	530.2
MN Digestive tract	0	---	0	---	0	---	0	---	---	---
MN of the small intestine	0	---	0	---	0	---	0	---	---	---
MN of the colon	0	---	0	---	0	---	0	---	---	---
MN of the rectum	0	---	0	---	0	---	0	---	---	---
MN of the liver and intrahepatic bile ducts	0	---	0	---	1	351.9	1	159.1	4.0	886.5
MN Pancreas	0	---	0	---	0	---	0	---	---	---
MN of the peritoneum	0	---	0	---	0	---	0	---	---	---
MN other and ill-defined of digestive tract	0	---	0	---	0	---	0	---	---	---
MN of the respiratory organs	2	187.4	1	91.7	6	337.3*	9	228.6*	104.5	433.9
MN nose and paranasal sinuses	0	---	0	---	0	---	0	---	---	---
MN of the larynx	0	---	0	---	0	---	0	---	---	---
MN of the lungs	2	212.0	0	---	2	126.3	4	114.7	31.3	293.7
MN of the pleura	0	---	1	3328.6	4	8362.4**	5	4576.6**	1485.6	10680.0
MN genitourinary organs	0	---	0	---	0	---	0	---	---	---
MN of the prostate	0	---	0	---	0	---	0	---	---	---
MN Testis	0	---	0	---	0	---	0	---	---	---
MN of the bladder	0	---	0	---	0	---	0	---	---	---
MN of the kidney	0	---	0	---	0	---	0	---	---	---
MN Eye and nervous system	1	887.8	0	---	0	---	1	260.1	6.5	1449.0
MN Other and ill defined sites	0	---	0	---	0	---	0	---	---	---
MN secondary	0	---	0	---	0	---	0	---	---	---
MN of unspecified site	0	---	0	---	0	---	0	---	---	---
Leukaemia and lymphoma	0	---	0	---	0	---	0	---	---	---
Psychiatric diseases	0	---	0	---	0	---	0	---	---	---
Neurological diseases	0	---	0	---	0	---	0	---	---	---
Cardiovascular diseases	3	147.0	5	215.1	2	59.7	10	129.6	62.1	238.4
Ischemic Heart diseases	1	108.4	1	97.7	1	65.6	3	86.4	17.8	252.6
Miocardial infarction	1	168.5	1	146.0	0	---	2	89.5	10.8	323.1
Respiratory diseases	1	332.7	1	293.7	1	193.8	3	259.3	53.5	757.6
Bronchitis, emphysema, asthma	0	---	1	771.2	0	---	1	285.4	7.1	1590.4
Asbestosis	0	---	0	---	0	---	0	---	---	---
All Pneumoconioses (incl Asbestosis)	0	---	0	---	0	---	0	---	---	---
Digestive diseases	0	---	0	---	0	---	0	---	---	---
Genitourinary diseases	0	---	0	---	0	---	0	---	---	---
Poorly specified causes	0	---	0	---	0	---	0	---	---	---
Accidents and violence	0	---	1	85.9	1	101.1	2	63.0	7.6	227.7
Unknown Causes	0	---	0	---	0	---	0	---	---	---

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

CAUSE OF DEATH	4.9 Asphalt rolls production - Men									
	Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles									
		<0.27		0.27-3.36		>3.36		TOTAL		
	OBS	SMR	OBS	SMR	OBS	SMR	OBS	SMR	LOWER	UPPER
All causes	18	114.0	28	98.3	41	87.0	87	95.2	76.2	117.4
Malignant neoplasm (MN)	5	79.2	12	108.0	19	98.3	36	97.9	68.6	135.6
MN of the lip, oral cavity and pharynx	0	---	1	358.3	3	683.4*	4	438.6*	119.5	1123.1
MN of the digestive organs (incl peritoneum)	2	91.7	5	130.9	11	165.0	18	142.1	84.2	224.6
MN Esophagus	0	---	0	---	0	---	0	---	---	---
MN of the stomach	0	---	1	105.1	4	239.2	5	159.6	51.8	372.4
MN Digestive tract	0	---	1	87.9	5	252.9	6	159.6	58.6	347.4
MN of the small intestine	0	---	0	---	0	---	0	---	---	---
MN of the colon	0	---	0	---	2	142.7	2	75.1	9.1	271.4
MN of the rectum	0	---	1	329.7	3	564.9*	4	395.6*	107.8	1013.0
MN of the liver and intrahepatic bile ducts	1	283.1	2	334.0	1	95.0	4	199.5	54.4	510.9
MN Pancreas	0	---	1	164.4	1	93.5	2	97.5	11.8	352.4
MN of the peritoneum	0	---	0	---	0	---	0	---	---	---
MN other and ill-defined of digestive tract	0	---	0	---	0	---	0	---	---	---
MN of the respiratory organs	1	47.1	4	105.9	3	44.6	8	63.3	27.3	124.7
MN nose and paranasal sinuses	0	---	0	---	0	---	0	---	---	---
MN of the larynx	0	---	0	---	0	---	0	---	---	---
MN of the lungs	1	51.9	4	116.3	3	48.8	8	69.5	30.0	136.9
MN of the pleura	0	---	0	---	0	---	0	---	---	---
MN genitourinary organs	0	---	2	156.1	1	43.9	3	71.8	14.8	209.8
MN of the prostate	0	---	2	391.3	0	---	2	120.4	14.6	434.8
MN Testis	0	---	0	---	0	---	0	---	---	---
MN of the bladder	0	---	0	---	0	---	0	---	---	---
MN of the kidney	0	---	0	---	1	168.1	1	87.0	2.2	484.9
MN Eye and nervous system	1	435.7	0	---	0	---	1	98.2	2.5	547.0
MN Other and ill defined sites	0	---	0	---	0	---	0	---	---	---
MN secondary	0	---	0	---	0	---	0	---	---	---
MN of unspecified site	0	---	0	---	1	189.7	1	100.1	2.5	557.7
Leukaemia and lymphoma	1	195.4	0	---	0	---	1	35.4	0.9	197.3
Psychiatric diseases	1	454.5	0	---	0	---	1	88.6	2.2	493.9
Neurological diseases	0	---	1	150.7	1	89.2	2	94.7	11.5	341.9
Cardiovascular diseases	5	124.5	9	105.3	11	75.1	25	91.9	59.5	135.6
Ischemic Heart diseases	2	98.9	4	96.7	5	70.9	11	83.3	41.6	149.0
Miocardial infarction	1	77.5	4	163.4	2	48.5	7	89.0	35.8	183.4
Respiratory diseases	2	376.8	1	71.8	1	41.4	4	92.2	25.1	236.2
Bronchitis, emphysema, asthma	1	770.0	0	---	0	---	1	107.5	2.7	599.1
Asbestosis	0	---	0	---	0	---	0	---	---	---
All Pneumoconioses (incl Asbestosis)	0	---	0	---	0	---	0	---	---	---
Digestive diseases	0	---	0	---	3	133.7	3	68.6	14.2	200.5
Genitourinary diseases	0	---	0	---	1	201.2	1	112.0	2.8	624.1
Poorly specified causes	0	---	0	---	0	---	0	---	---	---
Accidents and violence	1	51.0	2	81.4	2	69.4	5	68.5	22.2	159.9
Unknown Causes	1		1		1		3			

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

**Supplementary table 5 Italian pool of asbestos workers cohorts. Mortality by cause by industrial sector, women.** Observed deaths (OBS), Standardized Mortality Ratio (SMR), Lower and Upper limits of the 95% Confidence Interval.

CAUSE OF DEATH	Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles						TOTAL			
	<54.0		54.0-620.0		>620.0		LOWER	UPPER		
	OBS	SMR	OBS	SMR	OBS	SMR				
All causes	134	124.4*	328	120.3**	573	146.6**	1035	134.2**	126.1	142.6
Malignant neoplasm (MN)	54	129.4	136	147.1**	224	206.2**	414	170.5**	154.5	187.7
MN of the lip, oral cavity and pharynx	0	---	2	209.7	3	266.0	5	195.3	63.4	455.7
MN of the digestive organs (incl peritoneum)	21	156.4	35	109.3	74	181.5**	130	150.7**	125.9	179.0
MN Esophagus	0	---	0	---	0	---	0	---	---	---
MN of the stomach	5	204.5	9	153.1	8	95.4	22	131.7	82.5	199.3
MN Digestive tract	6	132.9	10	96.9	21	155.8	37	130.7	92.0	180.1
MN of the small intestine	0	---	0	---	0	---	0	---	---	---
MN of the colon	4	122.3	8	108.2	14	148.3	26	129.3	84.5	189.5
MN of the rectum	2	171.2	2	72.5	7	183.4	11	142.1	70.9	254.2
MN of the liver and intrahepatic bile ducts	0	---	2	43.2	8	151.9	10	86.7	41.6	159.5
MN Pancreas	4	159.2	7	129.4	3	49.2	14	99.9	54.6	167.6
MN of the peritoneum	2	615.8	3	399.5	26	2676.9**	31	1514.4**	1029.0	2149.6
MN other and ill-defined of digestive tract	0	---	1	54.5	5	200.8	6	119.6	43.9	260.4
MN of the respiratory organs	12	238.1*	45	441.5**	73	682.1**	130	501.3**	418.8	595.2
MN nose and paranasal sinuses	1	3012.6	0	---	0	---	1	534.4	13.4	2977.9
MN of the larynx	0	---	1	423.4	1	352.3	2	316.2	38.3	1142.4
MN of the lungs	3	66.1	22	242.9**	13	141.1	38	166.6**	117.9	228.6
MN of the pleura	8	2905.4**	22	3296.9**	59	6498.9**	89	4809.6**	3862.5	5918.6
MN genitourinary organs	8	134.7	9	66.7	31	183.6**	48	132.2	97.4	175.2
MN of the uterus	4	189.9	4	78.2	13	189.8*	21	149.2	92.4	228.1
MN of the ovaries	3	126.2	3	61.2	13	239.6**	19	149.6	90.1	233.6
MN of the bladder	1	217.1	1	83.2	4	217.6	6	171.4	62.9	373.0
MN of the kidney	0	---	1	64.3	0	---	1	24.5	0.6	136.7
MN Eye and nervous system	2	162.9	3	119.7	4	165.7	9	146.4	66.9	277.9
MN Other and ill defined sites	0	---	2	257.0	2	167.1	4	176.8	48.2	452.7
MN secondary	0	---	1	319.0	2	792.9	3	424.8	87.6	1241.3
MN of unspecified site	0	---	2	76.8	6	179.5	8	112.5	48.6	221.7
Leukaemia and lymphoma	3	82.6	8	99.3	11	124.6	22	107.2	67.2	162.4
Psychiatric diseases	0	---	5	116.5	12	182.7	17	132.7	77.3	212.5
Neurological diseases	1	28.0	4	46.7	9	80.9	14	60.2	32.9	101.0
Cardiovascular diseases	36	106.4	101	101.5	170	99.1	307	100.7	89.7	112.6
Ischemic Heart diseases	8	79.2	29	104.4	35	82.9	72	89.9	70.3	113.2
Miocardial infarction	5	92.8	11	76.7	13	59.1	29	69.5*	46.5	99.8
Respiratory diseases	6	130.6	23	184.1**	63	311.3**	92	246.5**	198.7	302.3
Bronchitis, emphysema, asthma	2	198.3	6	181.0	8	127.5	16	151.0	86.3	245.2
Asbestosis	0	---	10	69653.4**	41	135440.0**	51	102334.2**	76194.9	134551.5
All Pneumoconioses (incl Asbestosis)	0	---	10	42195.3**	42	75354.2**	52	59082.0**	44125.2	77478.1
Digestive diseases	9	158.6	19	123.8	17	87.1	45	111.0	81.0	148.5
Genitourinary diseases	3	219.2	4	102.1	6	117.5	13	125.1	66.6	213.9
Poorly specified causes	3	438.9	3	125.5	18	340.1**	24	286.9**	183.8	426.8
Accidents and violence	10	201.6	6	60.2	19	138.0	35	122.0	85.0	169.6
Unknown Causes	5		15		5		25			

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL

CAUSE OF DEATH	Cumulative exposure (f/ml - y, adjusted for fibre type) tertiles										TOTAL	
	<0.13		0.13-156.82		>156.82		OBS	SMR	OBS	SMR	LOWER	UPPER
	OBS	SMR	OBS	SMR	OBS	SMR						
All causes	127	89.8	255	125.5 **	66	113.9	448	111.3 *		101.2	122.1	
Malignant neoplasm (MN)	30	77.0	43	81.3	11	81.9	84	79.8 *		63.6	98.8	
MN of the lip, oral cavity and pharynx	0	---	0	---	0	---	0	---		---	---	
MN of the digestive organs (incl peritoneum)	13	81.5	13	57.0 *	1	16.3 *	27	60.1 **		39.6	87.5	
MN Esophagus	1	347.4	1	236.0	0	---	2	241.5		29.2	872.5	
MN of the stomach	2	47.6	1	15.6 *	0	---	3	24.0 **		5.0	70.2	
MN Digestive tract	3	61.6	2	29.2	0	---	5	36.9 *		12.0	86.2	
MN of the small intestine	0	---	0	---	0	---	0	---		---	---	
MN of the colon	2	56.3	2	40.3	0	---	4	40.7		11.1	104.3	
MN of the rectum	1	80.6	0	---	0	---	1	28.4		0.7	158.5	
MN of the liver and intrahepatic bile ducts	1	53.8	5	182.4	0	---	6	113.1		41.5	246.2	
MN Pancreas	3	134.8	1	34.2	1	140.6	5	85.3		27.7	199.0	
MN of the peritoneum	0	---	0	---	0	---	0	---		---	---	
MN other and ill-defined of digestive tract	1	83.0	3	177.9	0	---	4	119.7		32.6	306.6	
MN of the respiratory organs	4	113.2	5	111.7	2	189.3	11	121.3		60.6	217.1	
MN nose and paranasal sinuses	0	---	0	---	0	---	0	---		---	---	
MN of the larynx	0	---	0	---	0	---	0	---		---	---	
MN of the lungs	4	126.3	3	75.5	1	107.4	8	99.1		42.8	195.3	
MN of the pleura	0	---	2	920.4 *	1	1842.0	3	700.0 *		144.4	2045.7	
MN genitourinary organs	5	89.2	11	144.2	3	158.7	19	125.7		75.6	196.2	
MN of the uterus	2	95.8	2	66.8	0	---	4	68.5		18.7	175.5	
MN of the ovaries	0	---	6	258.5	2	373.1	8	169.6		73.2	334.1	
MN of the bladder	2	334.5	1	114.0	0	---	3	175.3		36.2	512.4	
MN of the kidney	1	138.2	2	211.7	0	---	3	158.2		32.6	462.4	
MN Eye and nervous system	1	102.1	1	81.8	1	368.4	3	121.3		25.0	354.4	
MN Other and ill defined sites	1	239.4	0	---	0	---	1	77.5		1.9	431.8	
MN secondary	0	---	0	---	0	---	0	---		---	---	
MN of unspecified site	0	---	0	---	1	267.3	1	32.1		0.8	178.8	
Leukaemia and lymphoma	2	60.7	1	23.2	2	191.8	5	57.8		18.8	134.9	
Psychiatric diseases	7	330.5 *	1	37.3	0	---	8	146.6		63.3	288.9	
Neurological diseases	4	86.0	3	47.4	1	66.4	8	64.0		27.7	126.2	
Cardiovascular diseases	43	68.9 *	109	116.6	29	100.8	181	98.0		84.2	113.4	
Ischemic Heart diseases	7	42.3 *	27	110.7	11	155.1	45	93.7		68.4	125.4	
Miocardial infarction	4	56.6	11	103.9	3	102.3	18	87.4		51.8	138.2	
Respiratory diseases	11	157.6	8	77.0	4	129.1	23	112.3		71.2	168.6	
Bronchitis, emphysema, asthma	5	244.1	1	31.5	1	99.6	7	112.5		45.2	231.8	
Asbestosis	0	---	0	---	0	---	0	---		---	---	
All Pneumoconioses (incl Asbestosis)	1	5344.9 *	0	---	0	---	1	1821.6		45.5	10150.2	
Digestive diseases	11	177.8	12	134.0	6	249.0	29	165.2 *		110.6	237.3	
Genitourinary diseases	1	51.7	3	108.4	0	---	4	73.3		20.0	187.6	
Poorly specified causes	1	41.0	0	---	0	---	1	13.3 **		0.3	73.8	
Accidents and violence	3	61.3	6	86.7	2	99.6	11	79.6		39.7	142.4	
Unknown Causes	10		54		9		73					

(\*) SIGNIFICANT AT 5% LEVEL; (\*\*) SIGNIFICANT AT 1% LEVEL