

INAIL

Regional seminar IV. Practical Guide for using asbestos registries

European Federation
of Building
and Woodworkers



Gospodarska
zbornica
Slovenije

The logo of the Slovenian Chamber of Commerce and Industry (GZS) consists of a green grid pattern with a diamond shape in the center.

Zbornica gradbeništva in
industrije gradbenega materiala



Roma, 21.09.2018

Alessandro Marinaccio

PRACTICAL GUIDE ON ASBESTOS REGISTRIES

REGIONAL SEMINAR IV

21st September 2018, from 9:00 to 16:00

Venue: Hotel H10 Roma Città, Via Amedeo Avogadro 35 (Quartiere Marconi), 00146 Rome

Keypoints

- ✓ Asbestos consumption and scientific knowledge;
- ✓ Mesothelioma registries: aims, structure, procedures and findings;
- ✓ Epidemiological findings as a tool for prevention policies and insurance system effectiveness.

Asbestos and scientific research

(1)

MORTALITY FROM LUNG CANCER IN ASBESTOS WORKERS

BY
RICHARD DOLL

From the Statistical Research Unit, Medical Research Council, London

(RECEIVED FOR PUBLICATION AUGUST 10, 1954.)

Brit. J. industr. Med., 1955, 12, 81.

Brit. J. industr. Med., 1960, 17, 260.

(2)

DIFFUSE PLEURAL MESOTHELIOMA AND ASBESTOS EXPOSURE IN THE NORTH WESTERN CAPE PROVINCE

BY

J. C. WAGNER, C. A. SLEGGs, and PAUL MARCHAND

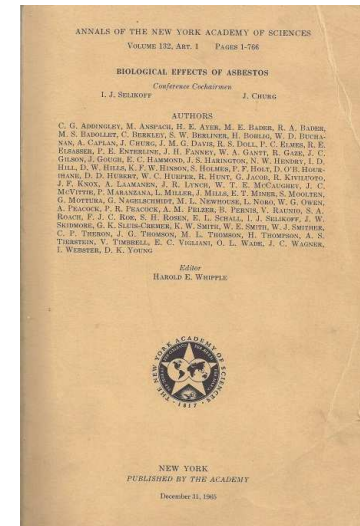
*From the Pathology Division, Pneumoconiosis Research Unit of the Council for Scientific and
Industrial Research, Johannesburg, West End Hospital, Kimberley, and the
Department of Thoracic Surgery, University of the Witwatersrand and Johannesburg General Hospital*

(RECEIVED FOR PUBLICATION APRIL 24, 1960)

Primary malignant tumours of the pleura are uncommon. Thirty-three cases (22 males, 11 females, ages 31 to 68) of diffuse pleural mesothelioma are described; all but one have a probable exposure to crocidolite asbestos (Cape blue). In a majority this exposure was in the Asbestos Hills which lie to the west of Kimberley in the north west of Cape Province. The tumour is rarely seen elsewhere in South Africa.

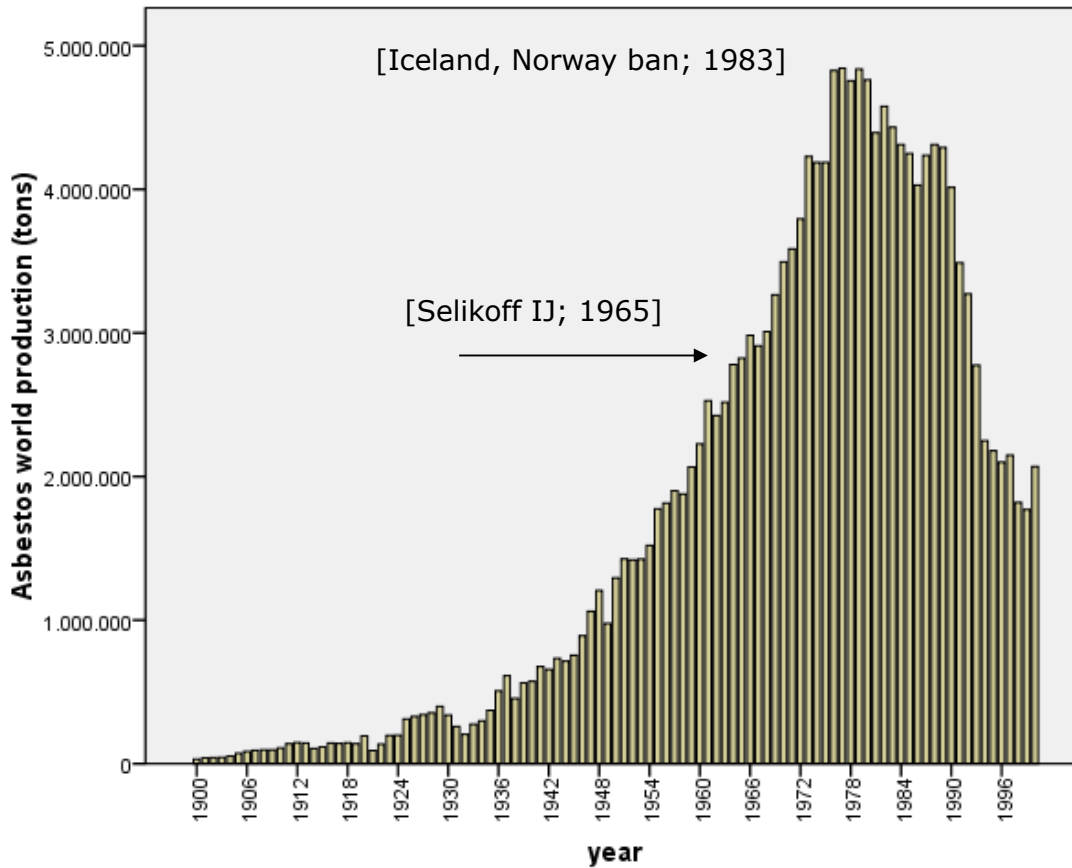
Between 1955 (1) and 1965 (3), R Doll, JC Wagner e I Selikoff demonstrated the association between asbestos exposure and mesothelioma (and lung cancer) risk.

(3)



RAW ASBESTOS WORLD PRODUCTION (1,000 tons; years 1900-2000)

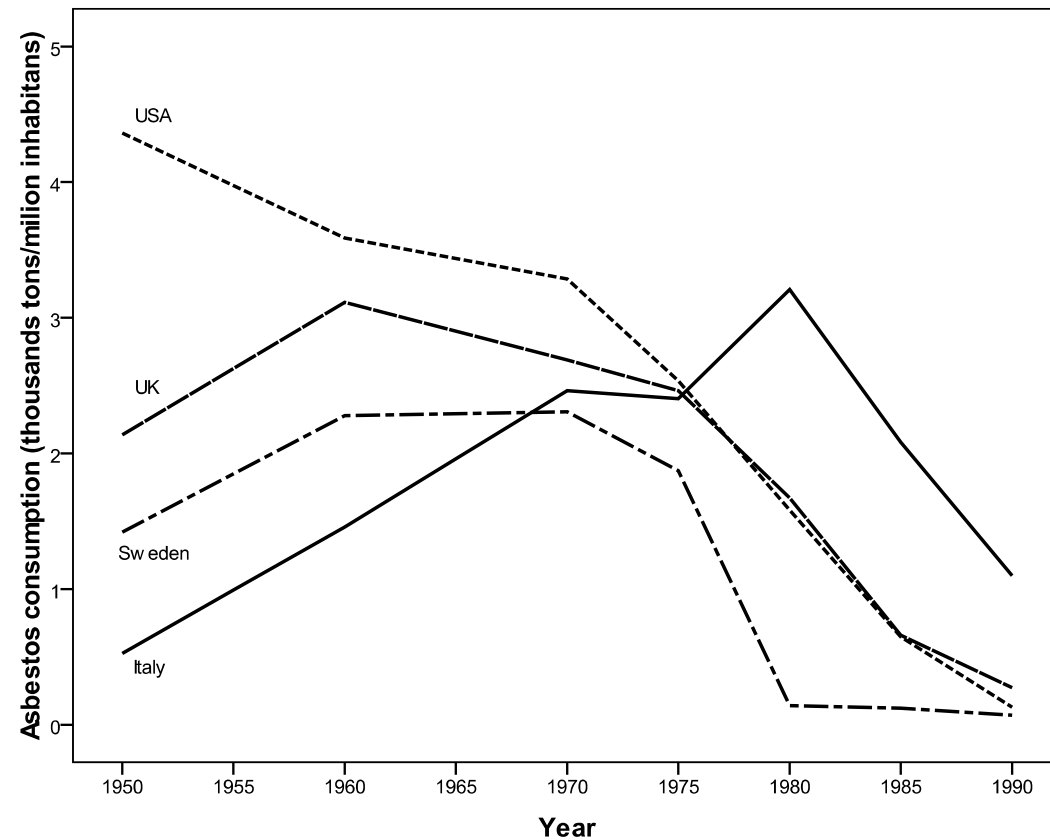
Asbestos production temporal trend (at aggregate world level) shows the gap between scientific research findings and commercial dynamics.



SOURCE: Virta R. U.S. Geological survey, different years

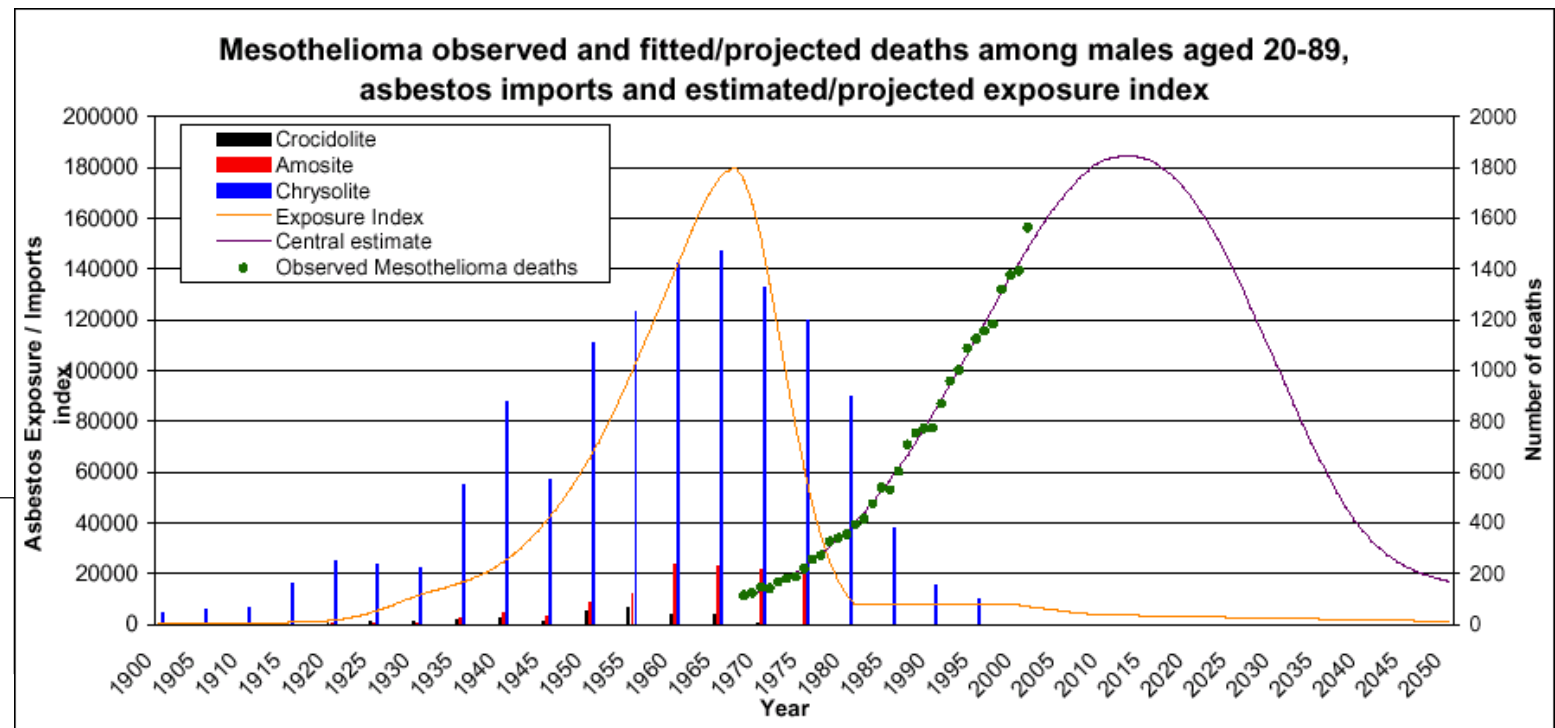
ASBESTOS CONSUMPTION (Kg/capita; historical trend: 1960-1990; selected countries)

The beginning of decreasing of asbestos consumption took place in Italy mainly ten years after many other industrialized countries.



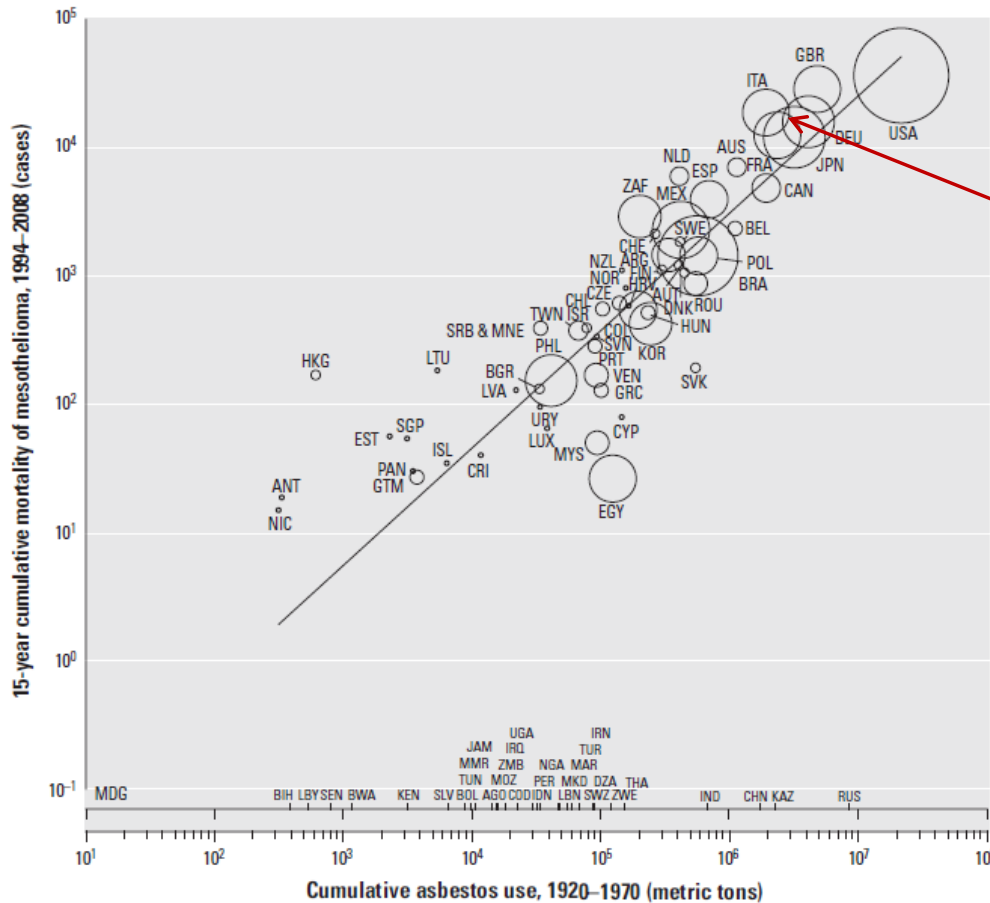
Asbestos consumption trend and mesothelioma occurrence. UK

Correlation value between asbestos consumption and asbestos related diseases (after a latency period) is particularly high.



SOURCE: Health and Safety Executive (HSE). Mesothelioma mortality in Great Britain: estimating the future burden. December 2003. available at: www.hse.gov.uk/statistics/causdis/proj6801.pdf

ASBESTOS CONSUMPTION (1920 – 1970) AND MESOTHELIOMA MORTALITY (2000-2004)



ITALY

Park EK, et al.
 Global magnitude of reported and unreported mesothelioma.
 EHP 2011, 119(4):514-8
 Environmental Health Perspectives • VOLUME 119 | NUMBER 4 | April 2011

ReNaM and regional mesothelioma registries network

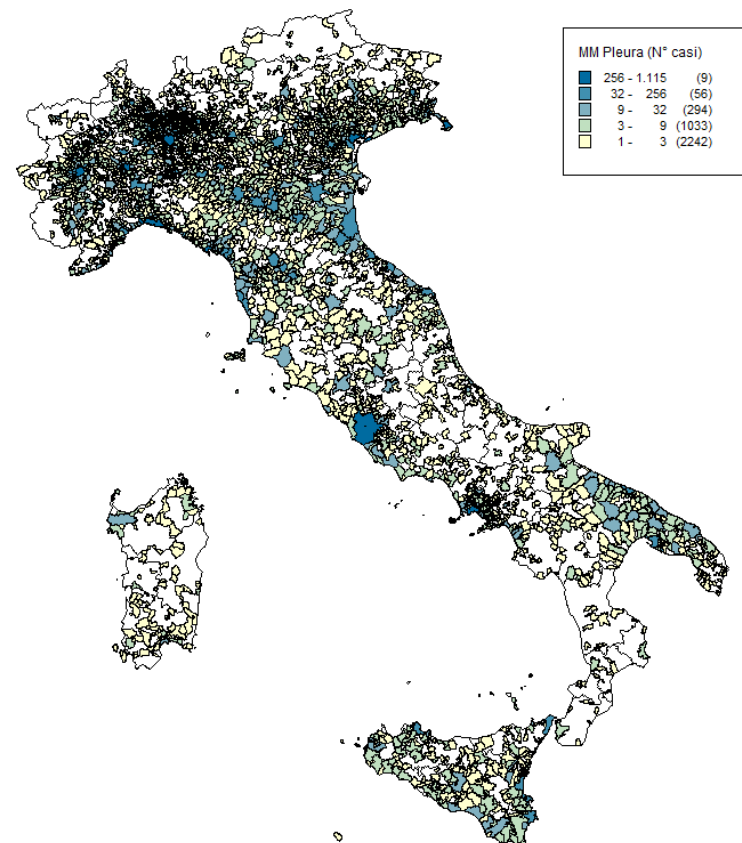
COR – Centri Operativi Regionali
ReNaM – Registro Nazionale dei Mesoteliomi

COR

ACTIVE SEARCH OF CASES
VERIFYING DIAGNOSIS
DIRECT INTERVIEW
DEFINING ASBESTOS EXPOSURE

ReNaM

NATIONAL DATA ANALYSES
SECTORS INVOLVED IN EXPOSURE
RESEARCH PROJECTS



Mesothelioma surveillance systems. International review survey.

I sistemi nazionali di sorveglianza dei casi di mesotelioma

National epidemiological surveillance systems of mesothelioma cases

Pierpaolo Ferrante, Alessandra Binazzi, Claudia Branchi, Alessandro Marinaccio
 Istituto nazionale per l'assicurazione contro gli infortuni sul lavoro (INAIL), Dipartimento di medicina,
 epidemiologia e igiene del lavoro e ambientale, Laboratorio di epidemiologia occupazionale e ambientale, Roma

Corrispondenza: Pierpaolo Ferrante; p.ferrante@inail.it

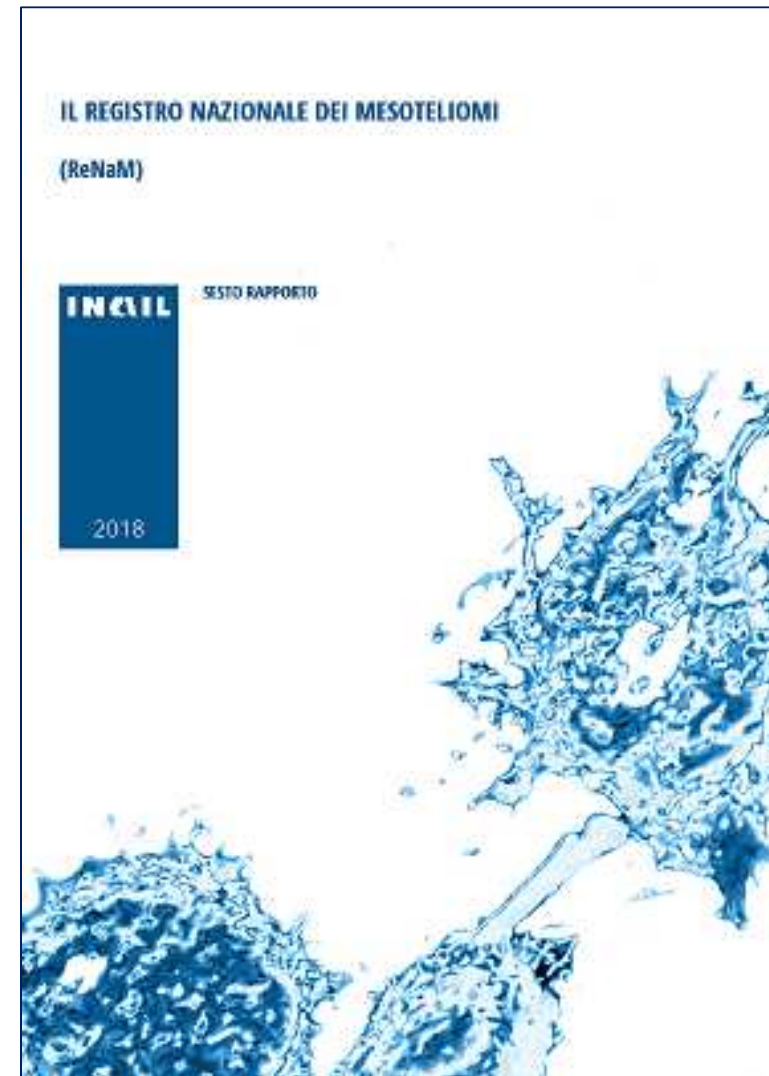
Nazione	Unità di rilevazione	Copertura e modalità di ricerca	Metodi di rilevazione dell'esposizione professionale	Metodi di rilevazione dell'esposizione ambientale
Italia	Casi incidenti	Nazionale	Questionario individuale	Questionario individuale
Australia	Casi incidenti	Nazionale	Questionario individuale	Questionario individuale
Corea del Sud	Casi incidenti	Nazionale	Questionario individuale	Questionario individuale
Francia	Casi incidenti	Parziale (30 %)	Questionario individuale	Questionario individuale
Germania	Segnalazione di MP	Nazionale	Documentazione segnalazione	No valutazione esposizione
UK	Decessi	Nazionale	Occupazione certificato decesso	No valutazione esposizione
Olanda	Segnalazione di MP	Nazionale	Documentazione segnalazione	No valutazione esposizione
Paesi Scandinavi	Casi incidenti	Nazionale	Documentazione dati censuari	No valutazione esposizione
USA	Casi incidenti	Parziale (28 %)	No valutazione esposizione	No valutazione esposizione

ReNaM Reports



I Report, published 2001, data until 1996
II Report, published 2006, data until 2001
III Report, published 2010, data until 2004
IV Report, published 2012, data until 2008
V Report, published 2015, data until 2012

VI Report (in press), data until 2015



ReNaM published papers

Survival

[Eur J Cancer; 2003] [Int J Cancer; 2009a, 2009b]

Incidence and asbestos exposure

[Am J Ind Med; 2003] [Int J Cancer; 2012]

Forecast scenario

[Int J Cancer; 2005]

Latency

[Eur J Cancer; 2007]

Environmental exposure

[Occ Env Med; 2010; 2015]

Extrapleural mesothelioma

[Occ Env Med; 2010]

Epidemiology and insurance system

[BMC Public Health; 2012]

Territorial clustering

[BMC Cancer; 2015]

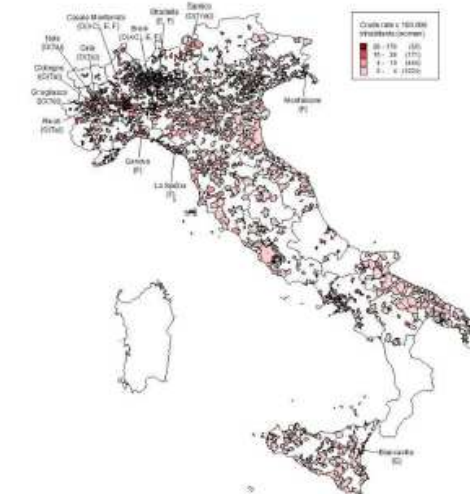
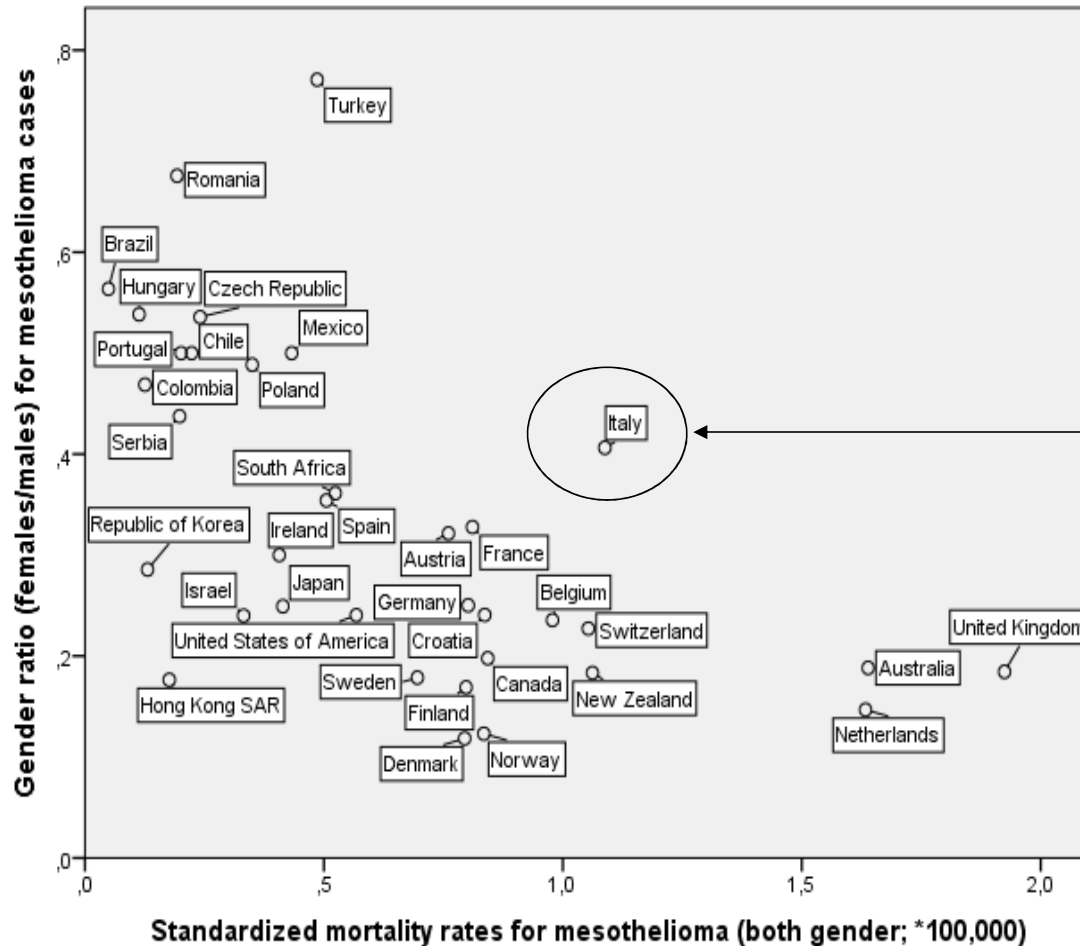


ReNaM Published papers. Mesothelioma incidence in women

ORIGINAL ARTICLE

The epidemiology of malignant mesothelioma in women: gender differences and modalities of asbestos exposure

Alessandro Marinaccio,¹ Marisa Corfiati,¹ Alessandra Binazzi,¹ Davide Di Marzio,¹ Alberto Scarselli,¹ Pierpaolo Ferrante,¹ Michela Bonafede,¹ Marina Verardo,² Dario Mirabelli,³ Valerio Gennaro,⁴ Carolina Mensi,⁵ Gert Schalleberg,⁶ Guido Mazzoleni,⁷ Enzo Merler,⁸ Paolo Girardi,⁸ Corrado Negro,⁹ Flavia D'Agostin,⁹ Antonio Romanelli,¹⁰ Elisabetta Chellini,¹¹ Stefano Silvestri,¹² Cristiana Pascucci,¹³ Roberto Calisti,¹³ Fabrizio Stracci,¹⁴ Elisa Romeo,¹⁵ Valeria Ascoli,¹⁶ Luana Trafficante,¹⁷ Francesco Carrozza,¹⁸ Italo Francesco Angelillo,¹⁹ Domenica Cavone,²⁰ Gabriella Cauzillo,²¹ Federico Tallarigo,²² Rosario Tumino,²³ Massimo Melis,²⁴ Sergio Iavicoli,¹ ReNaM Working Group



ReNaM Published papers.– Territorial clusters analysis

Corfiati et al. *BMC Cancer* (2015) 15:286
DOI 10.1186/s12885-015-1301-2



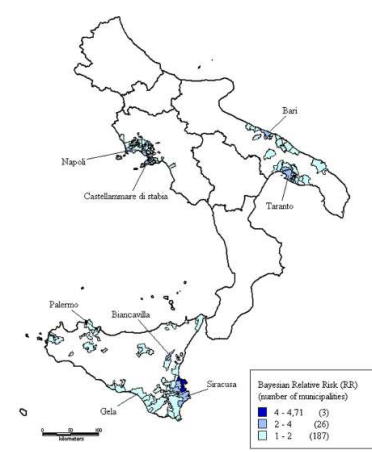
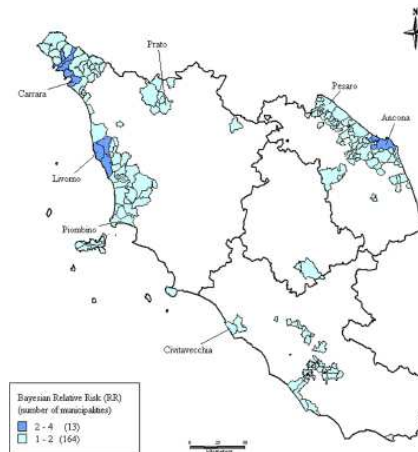
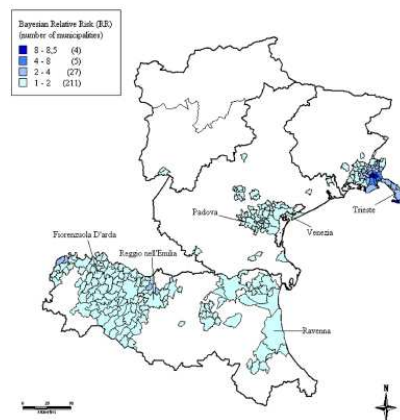
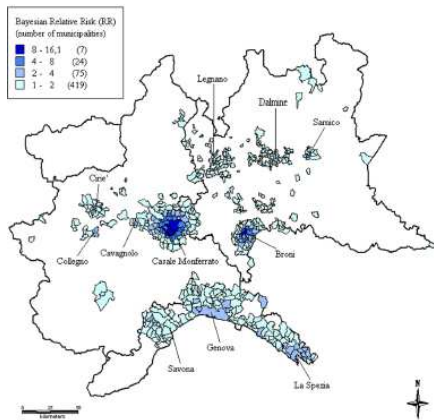
RESEARCH ARTICLE

Open Access

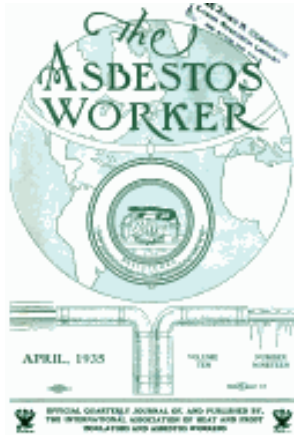
Epidemiological patterns of asbestos exposure and spatial clusters of incident cases of malignant mesothelioma from the Italian national registry

In Italy some areas (Casale Monferrato, Broni, Monfalcone, ...) presents an incidence level 30 times higher than national level.

The territorial map of MM cases is a sort of map of industrial use of asbestos in the past.



IJ SELIKOFF: Changing in exposure patterns



(1)

Quarriers and miners



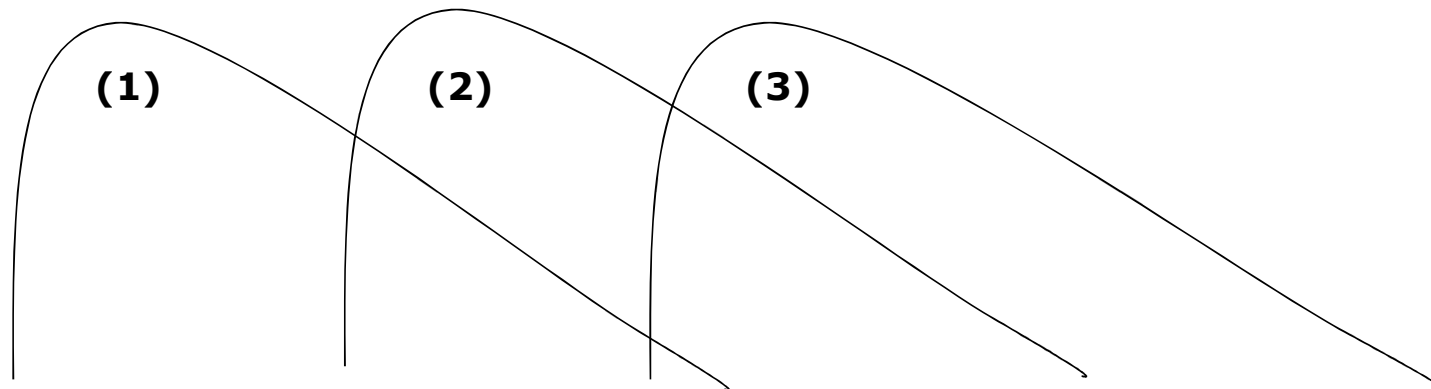
(2)

Workers in activities with
asbestos as raw material

Vol. 132; 1965
ANNALS of THE NEW YORK
ACADEMY OF SCIENCES

(3)

Workers and people exposed for
"asbestos in place"



ReNaM Published papers. Changing in exposure patterns

Rassegne e Articoli

ep anno 37 (1) ge

Sorveglianza epidemiologica dei mesoteliomi per la prevenzione dell'esposizione ad amianto anche in attività non tradizionalmente coinvolte

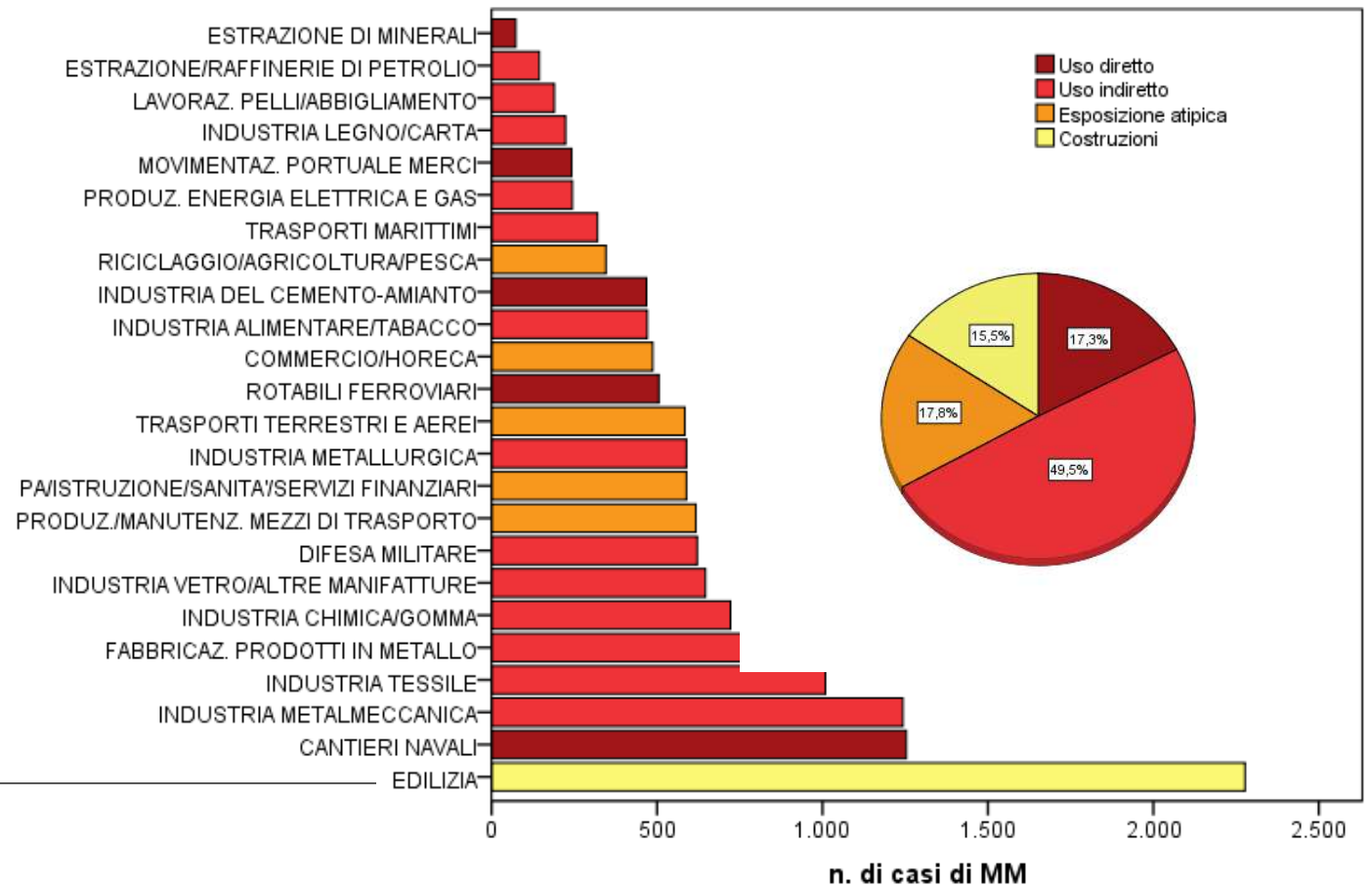


Corrispondenza
Alessandra Binazzi

CATEGORIA RENAM	PROFESSIONE	MASCHI	FEMMINE	ETÀ MEDIA	CERTEZZA DIAGNOSTICA			ESPOSIZIONE			BIBLIOGRAFIA	
					MM CERTO	MM PROBABILE	MM POSSIBILE	CERTA	PROBABILE	POSSIBILE		
		n. CASI (%)	n. CASI (%)	(± DS)	n. CASI (%)	n. CASI (%)	n. CASI (%)	n. CASI (%)	n. CASI (%)	n. CASI (%)		
11	Meccanici	146 (100,0)	–	66 (10,1)	123 (84,2)	16 (11,0)	7 (4,8)	100 (68,5)	18 (12,3)	28 (19,2)	146	Imbernon E et al. 2005; Richter RO et al. 2009; Jiang GCT et al. 2008; Blake CL et al. 2008; Goodman M et al. 2004; Menegozzo M et al. 2007; Finley BL et al. 2007.
12	Panettieri	38 (95,0)	2 (5,0)	67,2 (12,2)	34 (85,0)	2 (5,0)	4 (10,0)	13 (32,5)	3 (7,5)	24 (60,0)	40	Ascoli V et al. 1996; Ascoli V et al. 1998; Ascoli V et al. 2001.
	Vinificatori	8 (72,7)	3 (27,3)	65 (5,8)	10 (90,9)	1 (9,1)	–	6 (54,5)	3 (27,3)	2 (18,2)	11	Scansetti G et al. 1984.
16	Operai del legno	25 (100,0)	–	70,3 (12,6)	19 (76,0)	4 (16,0)	2 (8,0)	15 (60,0)	3 (12,0)	7 (28,0)	25	Malker HS et al. 1985; Meyer JD et al. 2001; Laakkonen A et al. 2006; Miller BA et al. 1994.
22	Gioiellieri	20 (66,6)	10 (33,3)	67,2 (9,1)	27 (90,0)	–	3 (10,0)	22 (73,3)	3 (10,0)	5 (16,7)	30	Dossing M e Langer SW 1994; Kern DG et al. 1992.
	Tappezzieri	8 (80,0)	2 (20,0)	71,2 (5,9)	18 (80,0)	1 (10,0)	1 (10,0)	4 (40,0)	1 (10,0)	5 (50,0)	10	Mensi C et al. 2009.
26	Agricoltori e contadini	73 (80,2)	18 (19,8)	71,8 (8,8)	74 (81,3)	11 (12,1)	6 (6,6)	49 (53,8)	3 (3,3)	39 (42,9)	91	Barbieri PG et al. 2008; Musk AW e Olsen NJ 2006; Gogou E et al. 2007.
28	Baristi	10 (83,3)	2 (16,7)	67,3 (8,7)	10 (83,3)	1 (8,3)	1 (8,3)	6 (50,0)	2 (16,7)	4 (33,3)	12	Luisi V et al. 2007.
34	Maestri elementari	4 (4,4)	5 (55,6)	68,3 (8,6)	8 (88,9)	1 (11,1)	–	4 (44,4)	4 (44,4)	1 (11,1)	9	Anderson HA et al. 1991; Lilienfeld DE 1991; Placidi D et al. 1999; Roggli VL e Longo WE 1991; Tsuzuki T et al. 2008.
37	Barbieri e parrucchieri	23 (59,0)	16 (41,0)	69,2 (10,4)	33 (84,6)	2 (5,1)	4 (10,3)	12 (30,8)	1 (2,6)	26 (66,7)	39	Riboldi L et al. 2005; Carugno M et al. 2012.

ReNaM Published papers. Changing in exposure patterns

Actually «Construction» is the economic sector with the highest number of MM cases ...



ReNaM Published papers. Environmental exposure

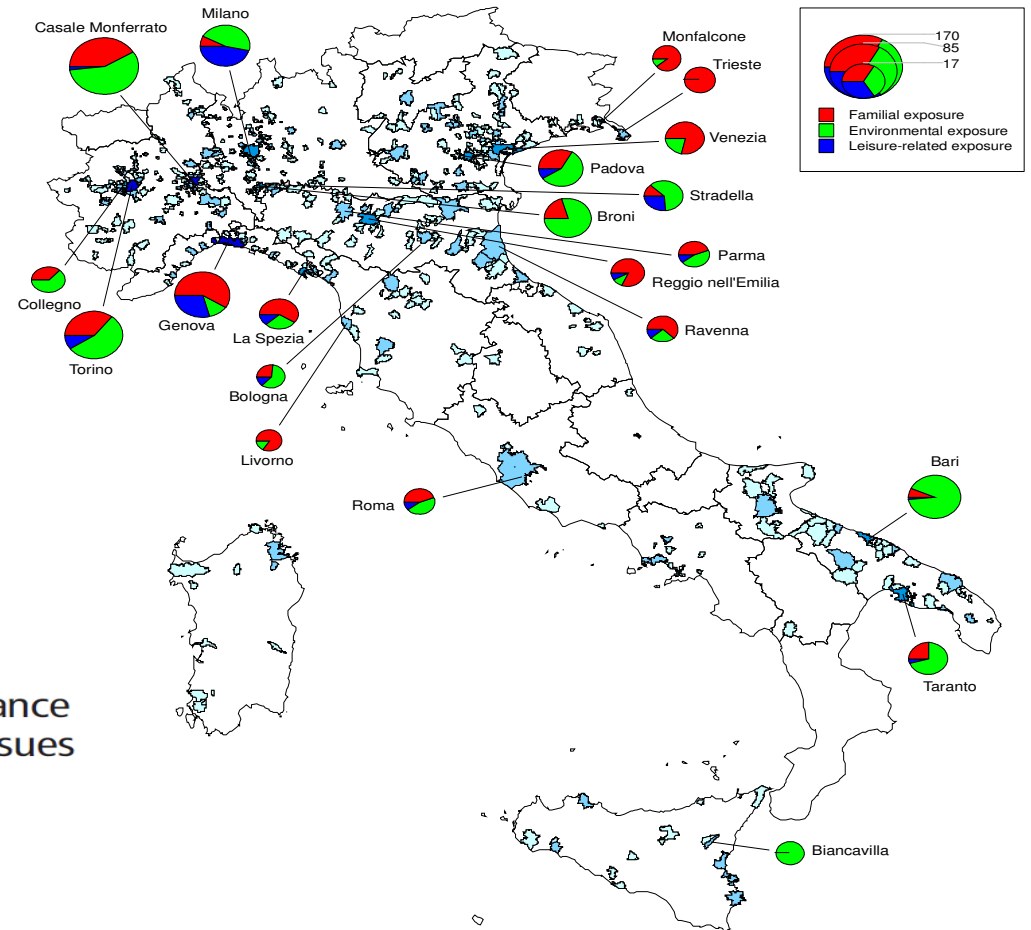
Environmental exposure to asbestos is a real concern (more than 10% of cases detected by ReNaM have been suffered a non-occupational exposure)

Occup Environ Med. 2015 Sep;72(9):648-55

ORIGINAL ARTICLE

Malignant mesothelioma due to non-occupational asbestos exposure from the Italian national surveillance system (ReNaM): epidemiology and public health issues

FONTE: Marinaccio A et al. [Occup Environ Med; 2015]



The international ban of asbestos is still «under debate» ...



Quito (Ecuador), novembre 2011



Bogotá (Colombia), settembre 2013

Russian mining firm puts Trump's face on its asbestos products

International edition ▾
The Guardian

Business
'Approved by Donald Trump': Asbestos sold by Russian company is branded with the president's face

The Washington Post
Democracy Dies in Darkness

CORRIERE DELLA SERA

AMBIENTE

Amianto: torna legale in Usa l'impiego in edilizia

La decisione dell'Agenzia di protezione ambientale. La società russa che lo esporta negli Stati Uniti ha messo l'immagine di Trump sulle confezioni



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Grazie dell'attenzione