



PRELIMINARY EVALUATION OF CANCER MORTALITY AMONG PEOPLE WHO LIVE IN MUNICIPALITIES CLOSE TO AN INCINERATION PLANT USING DATA FROM THE LOCAL REGISTRY OF CAUSES OF DEATH

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I n t r o d u c t i o n

After knowing that a project of expansion and enhancement of the incineration plant in Desio was under study, the Epidemiology Unit of the Local Health Authority (ASL) has been asked by a spontaneous group of inhabitants that live nearby to define if an increase of death rates for some neoplasms is found, potentially because of the exposition to pollutants in fumes from the incineration plant. Its activity dates back to 1976.

O b j e c t i v e

To evaluate if observed death rates in municipalities close to the incineration plant are higher than predicted for all causes, malignant neoplasms (ICD-9 140-239), soft tissue sarcomas (ICD-9 179) and non Hodgkin lymphomas (ICD-9 200, 202).

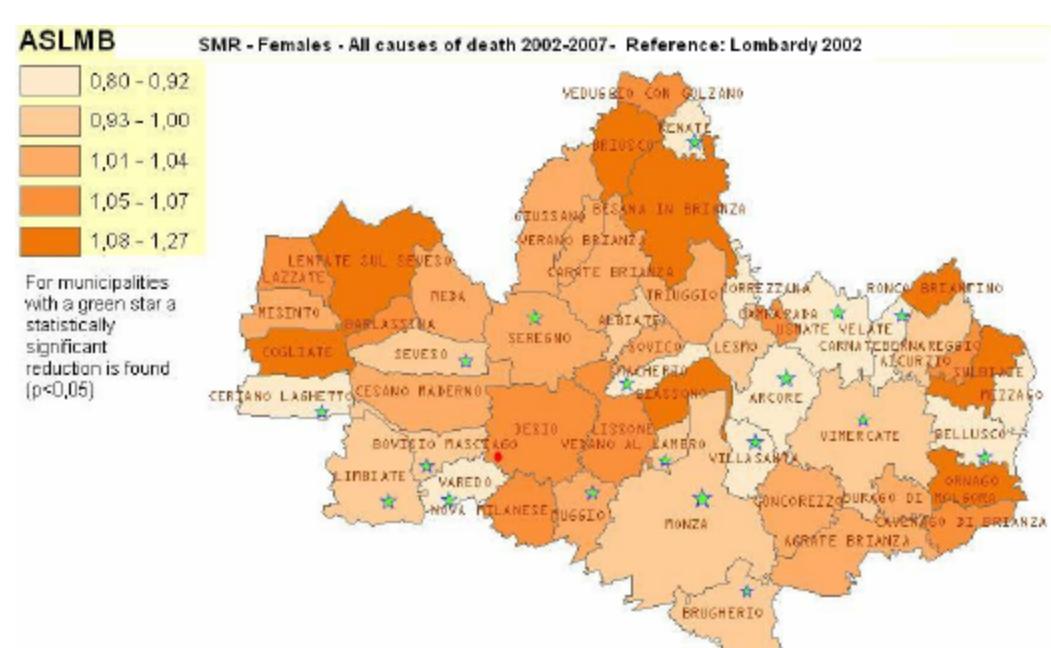
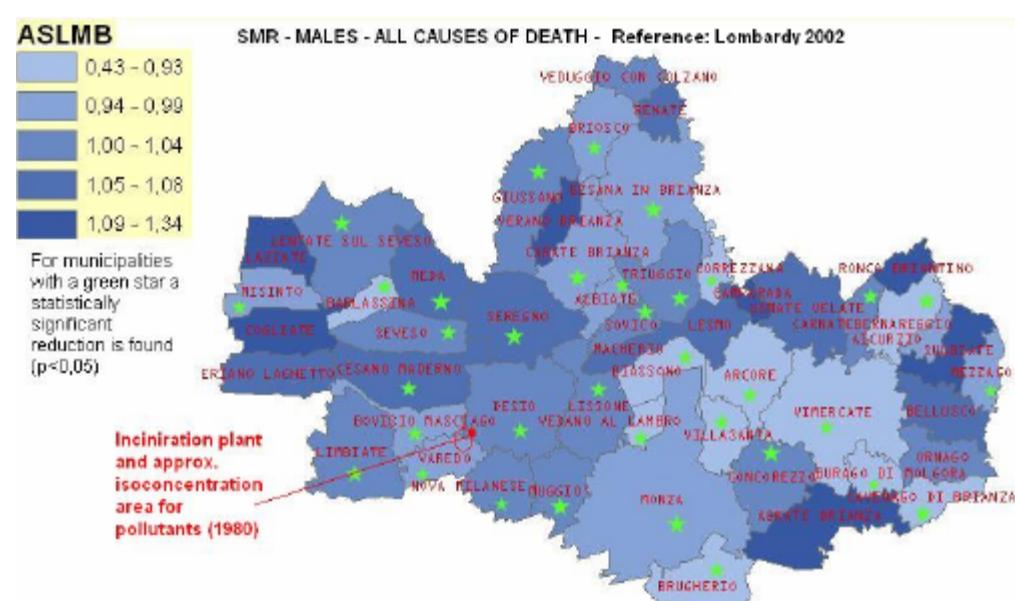
M e t h o d s

We used data since 2002 to 2007 from the local Registry of Causes of Deaths (RenCaM) and we evaluated crude and standardized death rates; Standardized Mortality Rates (SMR) with 95% Confidence

Intervals (95%CI) were calculated for people living in municipalities near the incineration plant. Mortality in each municipality was compared with the one of ASL as a whole.

R e s u l t s

SMRs for considered death causes were not significantly high. We had a isoconcentration map of the area for pollutants from the chimney at the beginning of the eighties: the maximum concentration area is within two municipalities that do not show significant excess of risk. The only significant excess of risk was found for non Hodgkin lymphomas among females in a municipality that is not in the high concentration area (SMR= 2,22; 95%CI: 1,11-3,97).



All neoplasms

Males 2002-2007		Reference ASLMB			
Municipality	N.	Raw rate x 100.000	IC95 inf	SM Ratios	IC95 sup
BOVISIO-MASCIAGO	121	278,51	0,81	0,97	1,16
CERIANO LAGHETTO	67	391,68	0,97	1,26	1,59
DESIO	338	308,32	0,88	0,98	1,09
LIMBIATE	300	312,07	0,88	0,98	1,10
LISSONE	363	332,36	0,94	1,05	1,16
MUGGIO'	205	311,83	0,85	0,98	1,13
NOVA MILANESE	194	288,92	0,86	0,99	1,14
VAREDO	112	302,83	0,73	0,89	1,07
Whole ASLMB (51 municipalities)	7.416	326,39		1	
Females 2002-2007					
BOVISIO-MASCIAGO	94	207,04	0,75	0,93	1,14
CERIANO LAGHETTO	43	242,86	0,73	1,01	1,37
DESIO	290	254,51	0,95	1,07	1,20
LIMBIATE	211	217,80	0,85	0,98	1,12
LISSONE	305	267,45	0,99	1,11	1,24
MUGGIO'	145	213,90	0,80	0,94	1,11
NOVA MILANESE	152	222,81	0,89	1,05	1,23
VAREDO	77	197,92	0,64	0,81	1,01
Whole ASLMB (51 municipalities)	5.847	246,38		1	

Non – Hodgkin Lymphomas

Males 2002-2007		Reference ASLMB			
Municipality	N.	Raw rate x 100.000	IC95 inf	SM Ratios	IC95 sup
BOVISIO-MASCIAGO	0				
CERIANO LAGHETTO	2	11,69	0,15	1,35	4,89
DESIO	9	8,21	0,43	0,94	1,79
LIMBIATE	8	8,32	0,41	0,95	1,88
LISSONE	7	6,41	0,29	0,73	1,50
MUGGIO'	3	4,56	0,10	0,52	1,52
NOVA MILANESE	9	13,4	0,75	1,64	3,12
VAREDO	3	8,11	0,18	0,87	2,55
Whole ASLMB (51 municipalities)	204	8,98		1	
Females 2002-2007					
BOVISIO-MASCIAGO	3	6,61	0,17	0,87	2,53
CERIANO LAGHETTO	1	5,65	0,01	0,69	3,82
DESIO	11	9,65	0,59	1,17	2,10
LIMBIATE	12	12,39	0,83	1,60	2,80
LISSONE	14	12,28	0,81	1,48	2,49
MUGGIO'	6	8,85	0,42	1,14	2,48
NOVA MILANESE	11	16,12	1,11	2,22	3,97
VAREDO	1	2,57	0,00	0,31	1,70
Whole ASLMB (51 municipalities)	201	8,47		1	

D i s c u s s i o n a n d C o n c l u s i o n s

One of the main goals of epidemiology in local health units is to evaluate if a risk can be assessed when a reasonable question about specific illnesses arises from the population whose health has to be taken care of under the point of view of prevention. In absence of a detailed spatial analysis with a better georeferentiation of persons that live around the incineration plant, preliminary examination of routinely available data doesn't apparently reveal an extremely alarming situation regarding evaluated causes of death.