Munich Cancer Registry

- Survival
- Selection Matrix
- Homepage

Munich Cancer Registry at Munich Cancer Center
Marchioninistr. 15
Munich, 81377
Germany

http://www.tumorregister-muenchen.de/en

Cancer statistics: Baseline statistics

C73: Thyroid cancer

Year of diagnosis	1998-2012
Patients	5,749
Diseases	5,787
Creation date	03/20/2014
Export date	02/12/2014
Population	4.5 m

http://www.tumorregister-muenchen.de/en/facts/base/base_C73__E.pdf

Global Statements about the statistics on the Internet − Baseline Statistics (grey button), Survival (red button)

In these analyses, the clinics and physicians of Upper Bavaria and the city and county of Landshut[#], with a total of 4.5 million inhabitants, account for the frequency of cancer diseases[##] and the achieved long term results. Additionally, the long term survival evaluated by the Munich Cancer Registry (MCR) is compared with the results of the population-based registry in the USA (SEER), which is useful for checking the consistency of the data on an international level.

In comparing several tables, inconsistent figures may be detected. This is based on the fact that different patient cohorts are included in the base calculation, for example when proportions of multiple tumors or DCO-cases[###] are concerned. In other cases the individual tumor diagnosis is the basis for calculation, for example with incidence.

The foot notes describe the currentness of the data. The baseline statistics and survival data are updated annually. This yearly analysis comprises the Annual Report of the MCR. The time-delayed acquisition of data and the occasionally high DCO-rates indicate optimizing reserves, among others, because of current financial and legal conditions that hinder the analyses.

Clinics and physicians have access to essentially more detailed data, with which they can check, compare and in the best case optimize their own data and results.

We would be pleased to receive corrections, critique and useful suggestions. Just send an e-mail to tumor@ibe.med.uni-muenchen.de.

Munich Cancer Registry, March 2014

[#] Base data has been collected since 1998. An increase in new diseases is apparent, which is an effect of two extensions in the MCR catchment area (from a base population of 2.51 million to 3.96 in 2002, and to 4.52 million in 2007). Death certificates from 2013 are incorporated into these analyses.

[##] Due to the high frequency and good prognosis of non-malignant skin cancer (C44), no systematic ascertainment is performed for this diagnosis. C44 is not designated as a primary, but rather as a secondary tumor.

[###] DCO (death certificate only) identifies a cancer case that first becomes available to the MCR through the death certificate. A high proportion of DCO cases (≥5%) in particular cancer types indicate insufficient participation of specific cancer specializations.

INCIDENCE

Table 1

Patient cohorts by year of diagnosis including DCO cases and multiple primaries, and with proportion of deaths and active follow-up

Year of diagnosis	Cases n	DCO cases n	Prop. DCO %	Prop. mult. primaries %	Prop. deaths %	Prop. actively followed %	
1998	209	9	4.3	24.4	31.1	93.3	
1999	200	5	2.5	24.0	23.0	95.5	
2000	232	5	2.2	23.3	22.4	97.8	
2001	195	5	2.6	19.0	20.5	97.9	
2002	313	14	4.5	23.0	26.2	95.2	#
2003	300	8	2.7	18.3	19.7	93.7	#
2004	355	9	2.5	13.8	14.6	92.4	#
2005	369	7	1.9	19.8	13.3	89.4	#
2006	420	9	2.1	18.3	12.6	85.2	#
2007	582	7	1.2	15.5	11.0	63.6	# ##
2008	661	13	2.0	13.0	10.1	44.3	
2009	619	4	0.6	15.7	7.1	42.5	
2010	506	15	3.0	15.2	8.7	41.7	
2011	455	8	1.8	16.5	9.5	47.5	
2012	371	1	0.3	14.0	7.5	96.2	###
1998-2012	5787	119	2.1	17.2	13.6	71.0	

\# The increases of incident cases in 2002 and 2007 reflect the expansion to additional registry areas.

Since 2007 the percentage of actively followed patients sharply declined compared to the previous years. This is a consequence of ambiguous data protection rules that currently forbid cancer registries in Bavaria to obtain the essential life status informations from competent registration offices.

Please be aware that data of recent annual patient cohorts may not yet be fully processed. Therefore, the presented figures and tables are potentially related to different time periods as pointed out in the respective headlines or legends.

Table 1a

Patient cohorts by year of diagnosis and gender
including DCO cases

Year of diagnosis	All n	Males n	Females n	Prop. males %
1998	209	43	166	20.6
1999	200	54	146	27.0
2000	232	61	171	26.3
2001	195	53	142	27.2
2002	313	80	233	25.6
2003	300	83	217	27.7
2004	355	107	248	30.1
2005	369	81	288	22.0
2006	420	116	304	27.6
2007	582	172	410	29.6
2008	661	170	491	25.7
2009	619	180	439	29.1
2010	506	116	390	22.9
2011	455	136	319	29.9
2012	371	117	254	31.5
1998-2012	5787	1569	4218	27.1

Table 2

Incidence measures by year of diagnosis and gender including DCO cases
(with respect to registry area expansion from 2.51 to 3.96 m as of 2002,
and from 3.96 to 4.52 m as of 2007, respectively)

Year of diagnosis	Males n	Females n	Males Inc. raw	Fem. Inc. raw	Males Inc. WS	Fem. Inc. WS	Males Inc. ES	Fem. Inc. ES	Males Inc. BRD-S	Fem. Inc. BRD-S
1998	43	166	3.9	14.1	2.7	9.7	3.5	12.1	4.0	13.4
1999	54	146	4.8	12.3	3.3	9.1	4.4	11.0	5.4	11.9
2000	61	171	5.4	14.2	3.6	10.3	4.9	12.6	5.6	13.3
2001	53	142	4.6	11.7	3.1	7.9	4.1	10.0	4.4	10.7
2002	80	233	4.3	11.9	3.0	8.4	3.8	10.5	4.2	11.4
2003	83	217	4.4	11.0	2.9	8.0	3.9	9.9	4.3	10.4
2004	107	248	5.7	12.5	3.9	9.0	5.0	11.0	5.7	11.9
2005	81	288	4.3	14.5	2.7	9.9	3.7	12.6	4.2	13.3
2006	116	304	6.1	15.1	4.0	10.5	5.2	13.3	5.7	14.1
2007	172	410	7.8	17.8	5.2	12.6	6.7	15.7	7.3	16.6
2008	170	491	7.6	21.2	5.3	14.6	6.8	18.3	7.4	19.6
2009	180	439	8.1	18.9	5.6	13.8	7.1	16.9	7.6	18.0
2010	116	390	5.1	16.7	3.2	11.6	4.2	14.4	4.8	15.4
2011	136	319	6.0	13.5	4.0	9.6	5.1	11.6	5.5	12.6
2012	117	254	5.1	10.8	3.4	8.0	4.4	9.7	4.8	10.2
1998-2012	1569	4218	5.7	14.7	3.8	10.3	4.9	12.8	5.5	13.7

The computation of the incidence measures includes all primaries, irrespective of first or subsequent malignancy.

Table 3

Age distribution parameters by year of diagnosis (All)
(incl. DCO)

Year of diagnosis	Cases n	Mean	Std. dev.	Min.	Max.	10%	25%	Median 50%	75%	90%
1998	209	54.9	16.2	13.0	89.6	33.4	43.0	54.4	67.3	77.1
1999	200	53.4	16.0	16.8	88.4	30.2	43.1	54.1	62.7	76.5
2000	232	53.9	16.9	11.3	93.7	32.1	42.3	55.3	65.5	76.1
2001	195	54.2	14.9	17.6	95.4	35.2	42.3	54.8	65.0	73.4
2002	313	55.3	16.2	7.8	91.2	34.6	44.9	55.9	66.4	75.0
2003	300	54.0	16.0	7.6	100	33.5	42.8	54.9	64.5	73.5
2004	355	53.5	15.9	14.8	91.6	32.3	41.9	53.2	64.7	75.1
2005	369	55.1	15.5	13.5	98.2	36.5	43.4	54.8	66.0	74.4
2006	420	54.3	14.5	15.1	94.9	35.0	43.5	55.2	65.1	73.1
2007	582	52.9	14.7	9.3	92.0	34.2	42.2	52.5	63.9	72.2
2008	661	54.4	15.2	12.7	97.7	34.4	43.1	54.9	65.1	73.6
2009	619	52.6	15.7	12.7	93.1	31.7	41.8	52.4	63.9	72.3
2010	506	54.6	15.9	14.3	94.5	34.8	43.5	54.7	65.8	76.4
2011	455	53.6	16.8	10.1	91.5	31.9	40.8	53.0	67.6	75.3
2012	371	52.3	15.1	13.3	91.7	32.7	41.9	52.4	63.7	71.6
1998-2012	5787	53.8	15.6	7.6	100	33.6	42.7	54.1	65.1	74.3

Table 3a

Age distribution parameters by year of diagnosis (MALES)
(incl. DCO)

Year of diagnosis	Cases n	Mean	Std. dev.	Min.	Max.	10%	25%	Median 50%	75%	90%
1998	43	54.7	13.9	27.2	81.5	37.2	46.2	55.2	66.2	76.2
1999	54	58.5	16.1	17.5	88.4	34.1	50.1	58.4	72.6	79.0
2000	61	58.2	17.8	15.9	93.7	32.7	47.5	57.7	69.9	79.8
2001	53	54.7	12.5	29.9	78.5	39.7	44.4	55.4	65.0	71.3
2002	80	54.9	16.8	7.8	88.6	34.8	43.0	56.5	65.8	75.4
2003	83	58.3	14.1	24.0	87.9	36.2	49.1	59.3	67.2	75.3
2004	107	55.9	15.4	16.1	88.1	36.4	45.2	57.4	66.5	75.8
2005	81	58.4	14.2	20.1	91.3	41.7	48.3	57.7	67.6	78.2
2006	116	56.3	14.0	19.6	93.4	37.4	45.7	58.1	65.8	72.3
2007	172	54.1	14.0	23.1	84.6	36.7	43.3	53.6	65.1	72.6
2008	170	55.3	14.6	12.7	89.5	34.9	46.6	56.8	64.8	72.9
2009	180	54.5	15.0	13.4	84.7	33.5	46.2	57.4	66.0	71.2
2010	116	58.5	14.7	24.1	88.5	38.4	47.8	57.8	70.7	76.4
2011	136	54.3	15.5	17.3	86.7	35.7	42.8	53.2	67.5	74.6
2012	117	56.0	15.1	19.6	91.7	36.8	44.8	57.8	66.8	74.3
1998-2012	1569	55.9	14.9	7.8	93.7	36.1	45.6	56.7	66.7	74.6

Table 3b

Age distribution parameters by year of diagnosis (FEMALES)
(incl. DCO)

Year of diagnosis	Cases n	Mean	Std. dev.	Min.	Max.	10%	25%	Median 50%	75%	90%
1998	166	54.9	16.8	13.0	89.6	33.0	42.2	54.3	68.4	77.2
1999	146	51.5	15.5	16.8	86.8	28.5	41.0	52.3	61.5	73.2
2000	171	52.3	16.3	11.3	91.0	31.9	41.4	53.4	64.6	72.4
2001	142	54.0	15.7	17.6	95.4	34.4	40.6	54.7	65.0	74.3
2002	233	55.4	16.1	10.0	91.2	34.5	46.5	55.9	66.7	75.0
2003	217	52.4	16.5	7.6	100	32.8	40.2	53.2	63.2	73.5
2004	248	52.4	16.0	14.8	91.6	31.6	40.3	52.4	63.6	74.3
2005	288	54.2	15.7	13.5	98.2	35.0	42.4	54.0	65.4	73.4
2006	304	53.5	14.7	15.1	94.9	34.8	42.3	54.5	63.7	73.2
2007	410	52.4	15.0	9.3	92.0	33.2	41.4	51.9	63.9	72.1
2008	491	54.1	15.4	16.2	97.7	34.2	42.3	54.3	65.2	74.2
2009	439	51.8	16.0	12.7	93.1	31.4	39.7	51.3	62.7	73.0
2010	390	53.5	16.1	14.3	94.5	34.0	42.1	52.7	63.9	76.4
2011	319	53.3	17.3	10.1	91.5	30.4	40.6	52.7	67.6	75.8
2012	254	50.6	14.8	13.3	87.2	31.8	40.3	50.5	60.9	70.1
1998-2012	4218	53.1	15.8	7.6	100	32.9	41.5	53.1	64.4	74.1

Table 4

Age distribution by 5-year age group and gender for period 1998-2012 (incl. DCO)

Age at diagnosis Years	Cases n	%	Cum.%	Males n	%	Cum.%	Females n	%	Cum.%
5-9	3	0.1	0.1	1	0.1	0.1	2	0.0	0.0
10-14	28	0.5	0.5	3	0.2	0.3	25	0.6	0.6
15-19	46	0.8	1.3	11	0.7	1.0	35	0.8	1.5
20-24	115	2.0	3.3	25	1.6	2.5	90	2.1	3.6
25-29	176	3.0	6.4	40	2.5	5.1	136	3.2	6.8
30-34	326	5.6	12.0	58	3.7	8.8	268	6.4	13.2
35-39	474	8.2	20.2	98	6.2	15.0	376	8.9	22.1
40-44	581	10.0	30.2	138	8.8	23.8	443	10.5	32.6
45-49	619	10.7	40.9	162	10.3	34.2	457	10.8	43.4
50-54	653	11.3	52.2	183	11.7	45.8	470	11.1	54.6
55-59	672	11.6	63.8	198	12.6	58.4	474	11.2	65.8
60-64	634	11.0	74.8	193	12.3	70.7	441	10.5	76.3
65-69	545	9.4	84.2	179	11.4	82.2	366	8.7	84.9
70-74	387	6.7	90.9	130	8.3	90.4	257	6.1	91.0
75-79	278	4.8	95.7	83	5.3	95.7	195	4.6	95.7
80-84	137	2.4	98.0	42	2.7	98.4	95	2.3	97.9
85+	113	2.0	100.0	25	1.6	100.0	88	2.1	100.0
All ages	5787	100.0		1569	100.0		4218	100.0	

Included in the statistics are 23.6% multiple primaries in males and 18.3% in females.

Table 5

Age-specific incidence, DCO rate and proportion of all cancers
for period 1998-2012

Age at diagnosis Years	Males n	Females n	Males Age-spec. incid.	Females Age-spec. incid.	Males DCO rate n=37 %	Females DCO rate n=82 %	Males Prop.all cancers n=146755 %	Females Prop.all cancers n=142297 %
0- 4			0.0	0.0				
5- 9	1	2	0.1	0.2			0.6	1.8
10-14	3	25	0.2	1.9			2.0	15.4
15-19	11	35	0.8	2.6			3.4	13.1
20-24	25	90	1.5	5.5			4.5	18.5
25-29	40	136	2.2	7.2			4.5	13.3
30-34	58	266	2.7	12.9			4.1	14.1
35-39	98	373	4.2	16.8			4.6	10.6
40-44	137	442	5.7	19.2		0.2	4.6	7.6
45-49	160	453	7.4	21.4			3.2	5.7
50-54	183	470	9.9	24.9	1.6	0.2	2.3	4.6
55-59	197	471	11.6	26.4	1.0	1.1	1.5	3.7
60-64	192	434	11.7	24.9	2.6	0.7	0.9	2.7
65-69	175	365	11.9	22.8	1.7	0.3	0.7	2.1
70-74	129	256	11.1	18.6	3.1	3.9	0.5	1.5
75-79	83	193	11.0	17.6	6.0	6.2	0.4	1.2
80-84	42	95	9.2	11.0	14.3	14.7	0.3	0.6
85+	25	88	8.1	10.7	36.0	39.8	0.3	0.5
All ages	1559	4194			2.4	2.0	1.1	2.9
Incidence								
Raw			5.7	14.6				
WS			3.8	10.3				
ES			4.9	12.8				
BRD-S			5.4	13.6				

The age-specific incidence characterizes the disease risk in a particular age group. The age distribution depends on the patient population frequency in each age group and reflects the tangible clinical picture of everyday patients care (see following chart).

Table 6a

Standardized incidence ratio (SIR, with 95% confidence limits),
excess absolute risk (EAR) and DCO rate of second primaries
for period 1998-2012
MALES

Diagnosis		Observed n	Expected n	SIR	LCL 95%	UCL 95%		EAR	DCO %
C15	Oesophagus	4	0.9	4.3	1.2	11.0	#	7.0	
C16	Stomach	2	1.7	1.1	0.1	4.1		0.6	
C18	Colon	8	4.1	1.9	0.8	3.8		8.8	
C19-C20	Rectum	10	2.7	3.7	1.8	6.8	#	16.6	
C22	Liver	2	1.3	1.6	0.2	5.7		1.7	
C32	Larynx	3	0.6	5.3	1.1	15.5	#	5.5	
C33-C34	Lung	8	5.5	1.5	0.6	2.9		5.7	12.5
C43	Malign. melanoma	6	2.1	2.9	1.1	6.3	#	9.0	
C61	Prostate	20	13.3	1.5	0.9	2.3		15.1	
C67	Bladder	5	1.7	2.9	0.9	6.8		7.5	20.0
C73	Thyroid	6	0.4	13.8	5.1	30.0	#	12.7	
C76-C79	CUP	3	0.7	4.0	0.8	11.8		5.1	
C82-C85	NHL	4	1.8	2.2	0.6	5.8		5.1	
C90	Mult. myeloma	2	0.5	3.7	0.4	13.4		3.3	
C91-C96	Leukaemia	2	0.7	3.0	0.4	10.7		3.0	
Other primaries		7	3.7	1.9	0.8	3.9		7.5	
Not observed		0	4.8	0.0	0.0	0.8	#	-11.0	
All mult. primaries		92	46.7	2.0	1.6	2.4	#	103.1	2.2

Patients	1025
Mean age at second malignancy (years)	66.3
Person-years	4393
Mean observation time (years)	4.3
Median observation time (years)	3.5

The occurrence of second malignancy is statistically significant.

Observed second primaries with count 1 are pooled in category "Other primaries".

Table 6b

Standardized incidence ratio (SIR, with 95% confidence limits), excess absolute risk (EAR) and DCO rate of second primaries for period 1998-2012
FEMALES

Diagnosis		Observed n	Expected n	SIR	LCL 95%	UCL 95%		EAR	DCO %
C16	Stomach	4	2.7	1.5	0.4	3.8		0.9	
C18	Colon	14	7.8	1.8	1.0	3.0		4.6	
C19-C20	Rectum	9	3.8	2.4	1.1	4.5	#	3.8	
C22	Liver	2	0.9	2.3	0.3	8.1		0.8	50.0
C23-C24	Bile	2	1.1	1.9	0.2	6.8		0.7	
C25	Pancreas	3	3.3	0.9	0.2	2.7		-0.2	
C33-C34	Lung	18	7.0	2.6	1.5	4.1	#	8.1	11.1
C38,C45	Mesothelioma	4	0.2	25.6	7.0	65.5	#	2.8	
C43	Malign. melanoma	6	4.3	1.4	0.5	3.1		1.3	
C46,C49	Soft tissue	2	0.6	3.5	0.4	12.8		1.1	
C48	Peritoneal	2	0.3	5.9	0.7	21.4		1.2	
C50	Breast	73	34.7	2.1	1.6	2.6	#	28.0	1.4
C51	Vulva	2	0.8	2.6	0.3	9.4		0.9	
C54	Corpus uteri	8	5.5	1.4	0.6	2.8		1.8	
C56	Ovary	10	4.1	2.4	1.2	4.5	#	4.3	
C64	Kidney	8	2.2	3.7	1.6	7.2	#	4.3	
C67	Bladder	3	1.3	2.3	0.5	6.7		1.2	
C70-C72	CNS cancer	4	1.5	2.7	0.7	7.0		1.9	
C73	Thyroid	17	2.9	5.9	3.4	9.5	#	10.4	
C74-C80	Cancer others	2	0.3	8.0	1.0	28.9		1.3	
C76-C79	CUP	4	1.3	3.0	0.8	7.8		2.0	
C82-C85	NHL	8	3.3	2.4	1.0	4.7	#	3.4	
C91-C96	Leukaemia	15	1.3	11.1	6.2	18.4	#	10.0	13.3
Other primaries		9	5.3	1.7	0.8	3.2		2.7	11.1
Not observed		0	2.6	0.0	0.0	1.4		-1.9	
All mult. primaries		229	98.9	2.3	2.0	2.6	#	95.3	3.1

Patients	2838
Mean age at second malignancy (years)	63.2
Person-years	13647
Mean observation time (years)	4.8
Median observation time (years)	4.2

The occurrence of second malignancy is statistically significant.

Observed second malignancies with count 1 are pooled in category "Other primaries".

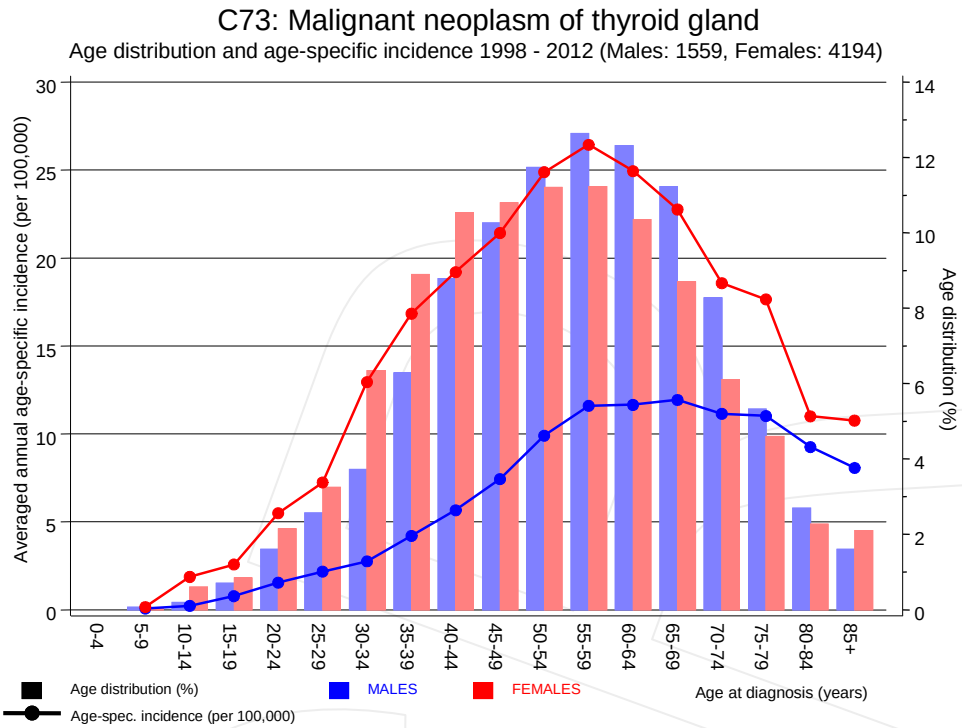


Figure 7. Age distribution and age-specific incidence

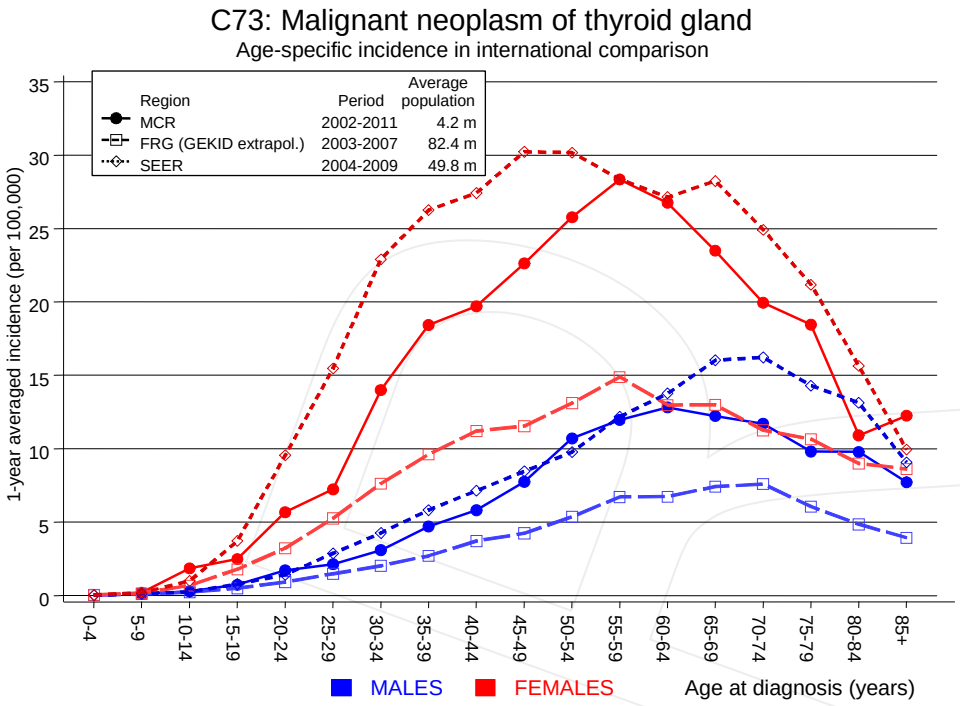


Figure 7a. Age-specific incidence in MCR registry areas compared to Germany (FRG, GEKID extrapolation) and SEER (Surveillance, Epidemiology, and End Results, USA).

Reference:

Extrapolated age-specific patient population of Germany, data status middle of 2010. Association of Population-based Cancer Registries in Germany (GEKID e.V.). Berlin, 2011. http://www.gekid.de. Last access: 05/12/2011

Surveillance, Epidemiology, and End Results (SEER) Program SEER*Stat Database: Incidence - SEER 18 Regs Research Data, released April 2012, based on the November 2011 submission. http://www.seer.cancer.gov.

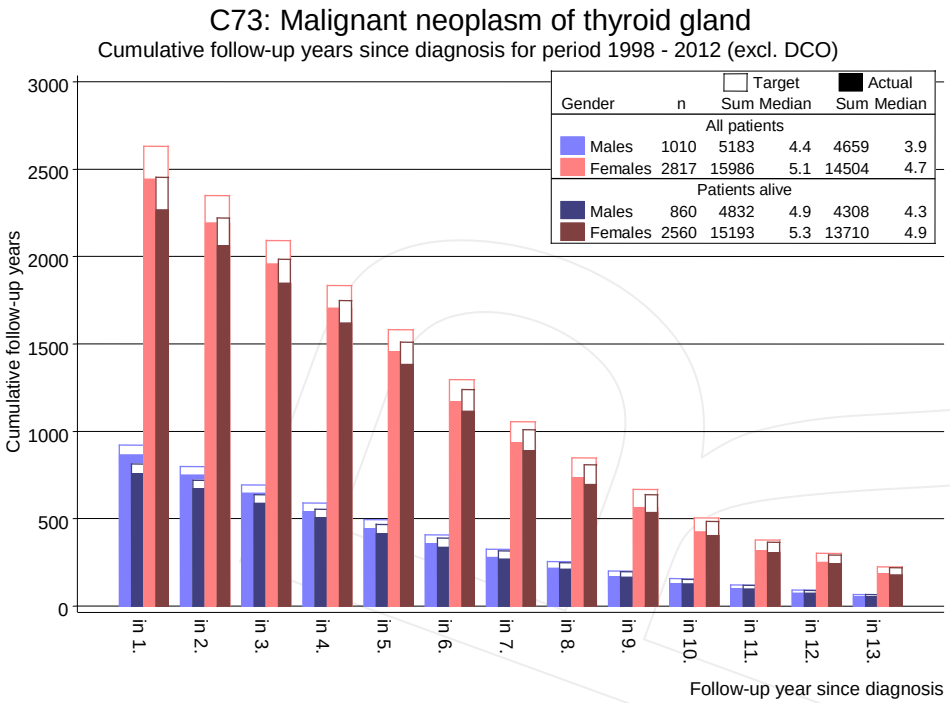
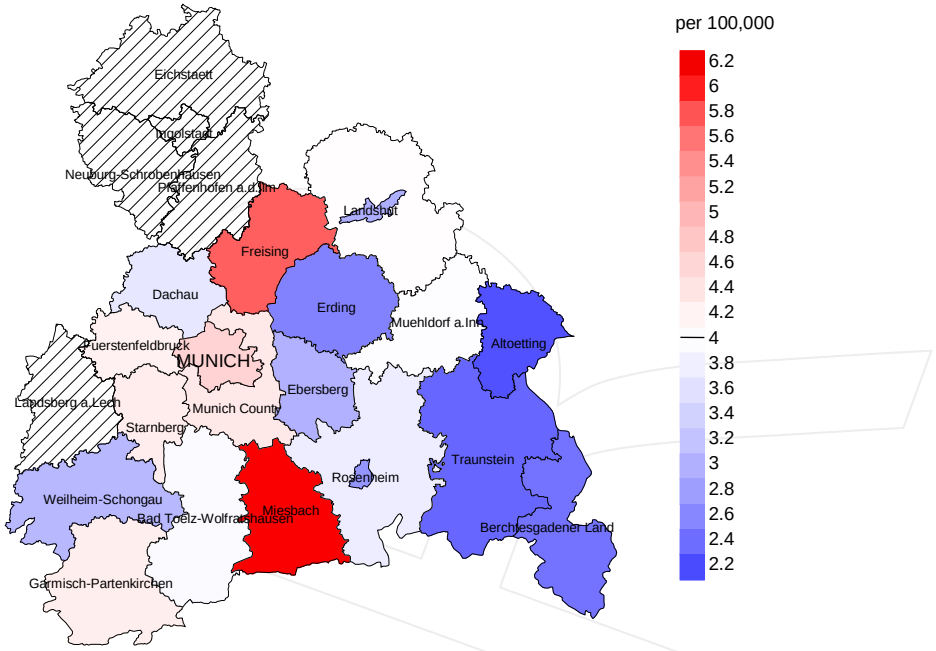


Figure 8. Cumulative follow-up years depending on time since diagnosis

The increase of the lost to follow-up rate can be interpreted as a consequence of a declining number of survivors over time.

Average incidence (world standard population) 2003 - 2008: Males



Average incidence (world standard population) 2003 - 2008: Females

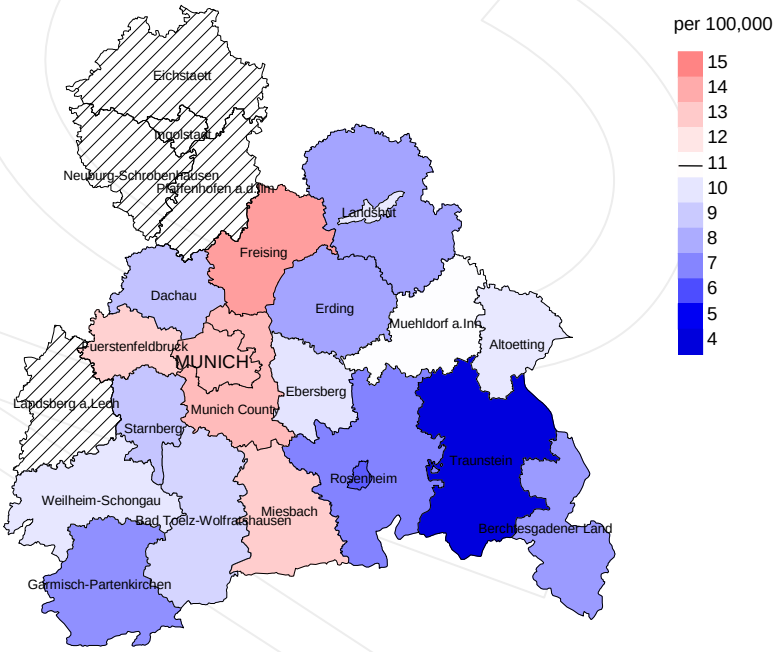
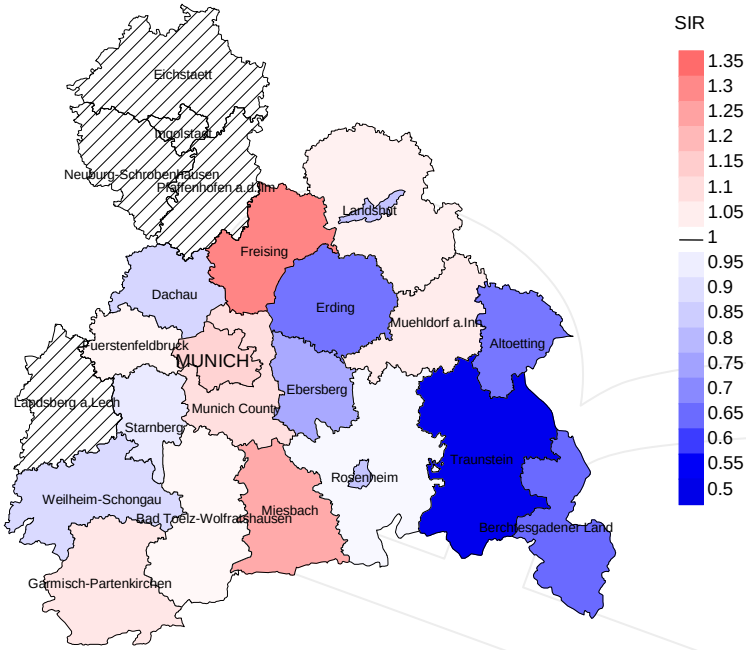


Figure 9a. Map of cancer incidence (world standard population, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual incidence rates, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population mean (males 4.0/100,000 WS N=693, females 11.0/100,000 WS N=1,894). Since cancer data are not available in some counties until 2007, the local incidence rates were not calculated, and the map tiles show as shaded.

The results should be interpreted with caution! E.g., in county Ebersberg with a population of 63,131 female residents (averaged) in the period from 2003 to 2008 a total of 57 women were identified with newly diagnosed thyroid cancer. Therefore, the mean incidence rate for this cancer type in this area can be calculated at 10.0/100,000 (world standard population). Though, the value of this parameter may vary with an underlying probability of 99% between 6.8 and 14.6/100,000.

Standardized incidence ratio (SIR) 2003 - 2008: Males



Standardized incidence ratio (SIR) 2003 - 2008: Females

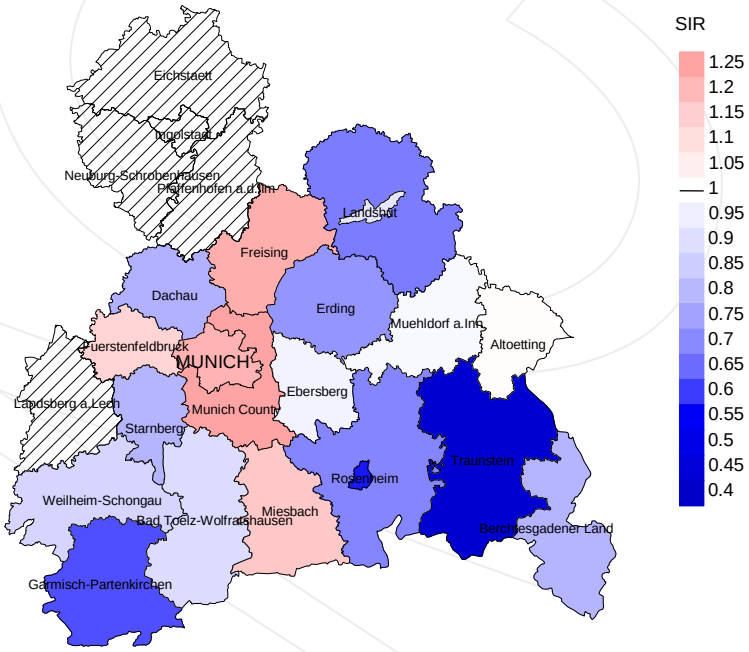


Figure 9b. Map of standardized incidence ratio (SIR, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual SIR values, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population overall of 1.0 (males N=693, females N=1,894). Since cancer data are not available in some counties until 2007, the local SIR values were not calculated, and the map tiles show as shaded.

The results should be interpreted with caution! E.g., in county Ebersberg with a population of 63,131 female residents (averaged) in the period from 2003 to 2008 a total of 57 women were identified with newly diagnosed thyroid cancer. Therefore, the mean standardized incidence ratio (SIR) for this cancer type in this area can be calculated at 0.96. Though, the value of this parameter may vary with an underlying probability of 99% between 0.67 and 1.34, and is therefore not statistically striking.

MORTALITY

Table 10a

Patient cohorts of incident cancers by year of diagnosis, follow-up status, proportion of DCO, deaths among the annual cohorts, and proportion of available death certificates (with respect to registry area expansion from 2.51 to 3.96 m as of 2002, and from 3.96 to 4.52 m as of 2007, respectively)

Year of diagnosis	Incident cases n	Prop. actively followed %	Prop. DCO %	Deaths n	Prop. deaths %	Prop. deaths with death certific. %
1998	209	93.3	4.3	65	31.1	96.9
1999	200	95.5	2.5	46	23.0	95.7
2000	232	97.8	2.2	52	22.4	98.1
2001	195	97.9	2.6	40	20.5	97.5
2002	313	95.2	4.5	82	26.2	97.6
2003	300	93.7	2.7	59	19.7	96.6
2004	355	92.4	2.5	52	14.6	100.0
2005	369	89.4	1.9	49	13.3	98.0
2006	420	85.2	2.1	53	12.6	100.0
2007	582	63.6	1.2	64	11.0	95.3
2008	661	44.3	2.0	67	10.1	100.0
2009	619	42.5	0.6	44	7.1	100.0
2010	506	41.7	3.0	44	8.7	97.7
2011	455	47.5	1.8	43	9.5	97.7
2012	371	96.2	0.3	28	7.5	89.3
1998-2012	5787	71.0	2.1	788	13.6	97.6

Table 10b

Annual cohorts of incident cancers and deaths, proportion of death certificates and cases deceased the same year of cancer diagnosis
(incl. DCO)
(with respect to registry area expansion from 2.51 to 3.96 m as of 2002, and from 3.96 to 4.52 m as of 2007, respectively)

Year of diagnosis/ death	Incident cases n	Deaths n	Prop. deaths with death certific. %	Deaths in same year n	Prop. deaths in same year %
1998	209	53	96.2	18	8.6
1999	200	45	88.9	12	6.0
2000	232	48	91.7	13	5.6
2001	195	38	86.8	13	6.7
2002	313	69	98.6	26	8.3
2003	300	81	93.8	18	6.0
2004	355	68	95.6	20	5.6
2005	369	83	100.0	20	5.4
2006	420	100	98.0	18	4.3
2007	582	92	93.5	24	4.1
2008	661	72	98.6	25	3.8
2009	619	87	97.7	19	3.1
2010	506	114	98.2	30	5.9
2011	455	134	100.0	32	7.0
2012	371	116	96.6	15	4.0
1998-2012	5787	1200	96.5	303	5.2

Table 10c

Annual cohorts of deaths, proportion of cancer-related and not cancer-related deaths, and cancer recorded on death certificates (incl. DCO)
(with respect to registry area expansion from 2.51 to 3.96 m as of 2002, and from 3.96 to 4.52 m as of 2007, respectively)

Year of death	Deaths n	Prop. cancer-related %	Prop. not cancer-related %	Prop. cancer recorded on death certificate %
1998	53	79.2	20.8	94.1
1999	45	71.1	28.9	87.5
2000	48	75.0	25.0	88.6
2001	38	68.4	31.6	87.9
2002	69	84.1	15.9	98.5
2003	81	66.7	33.3	84.2
2004	68	70.6	29.4	81.5
2005	83	77.1	22.9	78.3
2006	100	71.0	29.0	82.7
2007	92	73.9	26.1	83.7
2008	72	68.1	31.9	87.3
2009	87	74.7	25.3	87.1
2010	114	71.9	28.1	75.9
2011	134	66.4	33.6	80.6
2012	116	61.2	38.8	67.0
1998-2012	1200	71.3	28.8	82.6

Table 11a

Means of age at death according to the grouping in Table 10
MALES

Year of death	Deaths n	Age at death (all causes) Years	Age at death (cancer-related) Years	Age at death (not cancer-related) Years	Age at death (according to death certificate) Years
1998	18	67.9	69.0	59.1	69.0
1999	18	71.2	71.0	71.8	72.5
2000	22	72.9	72.7	73.9	73.3
2001	14	70.8	69.4	74.0	70.8
2002	21	75.7	75.2	79.1	76.5
2003	26	72.4	73.1	70.1	72.8
2004	27	70.6	70.7	70.3	69.6
2005	29	73.3	73.9	71.4	72.2
2006	36	73.6	72.5	78.2	72.7
2007	35	71.5	72.6	68.5	72.9
2008	19	72.8	75.2	65.9	75.3
2009	26	71.4	68.2	80.0	70.0
2010	41	72.8	71.1	79.0	71.9
2011	44	71.1	68.3	77.2	69.9
2012	44	73.4	72.2	77.3	73.0
1998-2012	420	72.2	71.7	74.1	72.2

Deaths of patients are considered to be cancer-related, in case that fact was recorded on the death certificate, or patients had suffered from metastasis or recurrence.

Table 11b

Means of age at death according to the grouping in Table 10
FEMALES

Year of death	Deaths n	Age at death (all causes) Years	Age at death (cancer-related) Years	Age at death (not cancer-related) Years	Age at death (according to death certificate) Years
1998	35	77.2	76.4	79.3	77.9
1999	27	72.1	70.7	75.5	69.8
2000	26	74.3	68.6	87.3	74.3
2001	24	74.7	71.9	80.4	75.2
2002	48	74.4	74.1	75.7	74.3
2003	55	74.4	74.3	74.5	75.0
2004	41	74.6	72.7	78.9	73.2
2005	54	76.6	75.6	80.3	75.2
2006	64	76.5	74.2	80.9	74.2
2007	57	75.8	75.2	77.3	75.5
2008	53	77.0	75.0	80.8	76.7
2009	61	77.4	76.5	80.2	77.0
2010	73	75.3	72.5	81.2	73.0
2011	90	77.9	77.0	79.5	76.8
2012	72	75.8	74.0	77.6	74.4
1998-2012	780	75.9	74.4	79.1	75.1

By 2010, life expectancy for a newborn male in Germany is 77.5 years compared with 82.6 years for his female counterpart.

Deaths of patients are considered to be cancer-related, in case that fact was recorded on the death certificate, or patients had suffered from metastasis or recurrence.

Table 12a

Mortality measures (cancer-related death) and mortality-incidence-index
by year of death
MALES

Year of death	Deaths n	Mort. raw	MI-Index raw	Mort. WS	MI-Index WS	Mort. ES	MI-Index ES	Mort. BRD-S	MI-Index BRD-S
1998	16	1.4	0.37	0.8	0.30	1.3	0.37	1.9	0.48
1999	13	1.2	0.24	0.7	0.21	1.0	0.24	1.4	0.26
2000	18	1.6	0.30	0.8	0.24	1.4	0.30	2.1	0.38
2001	10	0.9	0.19	0.5	0.16	0.8	0.19	1.0	0.23
2002	18	1.0	0.23	0.5	0.16	0.8	0.21	1.1	0.27
2003	20	1.1	0.24	0.5	0.19	0.9	0.23	1.2	0.29
2004	20	1.1	0.19	0.5	0.14	0.8	0.17	1.2	0.22
2005	22	1.2	0.27	0.6	0.20	0.9	0.25	1.3	0.32
2006	29	1.5	0.25	0.8	0.19	1.2	0.23	1.6	0.28
2007	26	1.2	0.15	0.6	0.11	0.9	0.13	1.2	0.17
2008	14	0.6	0.08	0.3	0.05	0.5	0.07	0.7	0.09
2009	19	0.9	0.11	0.4	0.08	0.6	0.09	0.8	0.11
2010	32	1.4	0.28	0.7	0.21	1.0	0.24	1.3	0.27
2011	30	1.3	0.22	0.7	0.17	1.0	0.20	1.2	0.22
2012	34	1.5	0.29	0.7	0.20	1.1	0.25	1.5	0.31
1998-2012	321	1.2	0.21	0.6	0.15	0.9	0.18	1.2	0.23

Table 12b

Mortality measures (cancer-related death) and mortality-incidence-index
by year of death
FEMALES

Year of death	Deaths n	Mort. raw	MI-Index raw	Mort. WS	MI-Index WS	Mort. ES	MI-Index ES	Mort. BRD-S	MI-Index BRD-S
1998	26	2.2	0.16	0.8	0.08	1.3	0.11	1.9	0.14
1999	19	1.6	0.13	0.7	0.08	1.1	0.10	1.4	0.12
2000	18	1.5	0.11	0.8	0.07	1.1	0.08	1.3	0.10
2001	16	1.3	0.11	0.6	0.07	0.8	0.08	1.0	0.10
2002	40	2.0	0.17	0.8	0.09	1.2	0.12	1.7	0.15
2003	34	1.7	0.16	0.7	0.08	1.0	0.10	1.3	0.13
2004	28	1.4	0.11	0.5	0.06	0.8	0.07	1.1	0.09
2005	42	2.1	0.15	0.8	0.08	1.2	0.10	1.6	0.12
2006	42	2.1	0.14	0.8	0.08	1.3	0.09	1.7	0.12
2007	42	1.8	0.10	0.7	0.05	1.0	0.07	1.4	0.09
2008	35	1.5	0.07	0.5	0.04	0.8	0.05	1.2	0.06
2009	46	2.0	0.11	0.7	0.05	1.1	0.06	1.3	0.07
2010	50	2.1	0.13	0.8	0.07	1.3	0.09	1.6	0.11
2011	59	2.5	0.19	0.8	0.08	1.3	0.11	1.8	0.15
2012	37	1.6	0.15	0.6	0.07	0.9	0.09	1.2	0.12
1998-2012	534	1.9	0.13	0.7	0.07	1.1	0.08	1.5	0.11

Table 13

Age distribution of age at death (cancer-related) for period 1998-2012
(**incl. multiple primaries**)

Age at death Years	Cases n	%	Cum.%	Males n	%	Cum.%	Females n	%	Cum.%
15-19	1	0.1	0.1			0.0	1	0.2	0.2
20-24	0	0.0	0.1			0.0			0.2
25-29	2	0.2	0.3			0.0	2	0.4	0.6
30-34	1	0.1	0.5			0.0	1	0.2	0.7
35-39	4	0.5	0.9	4	1.2	1.2			0.7
40-44	4	0.5	1.4			1.2	4	0.7	1.5
45-49	17	2.0	3.4	7	2.2	3.4	10	1.9	3.4
50-54	33	3.8	7.2	13	4.0	7.4	20	3.7	7.1
55-59	45	5.2	12.4	20	6.2	13.6	25	4.7	11.7
60-64	91	10.6	23.0	46	14.2	27.8	45	8.4	20.1
65-69	87	10.1	33.1	38	11.7	39.5	49	9.1	29.2
70-74	155	18.0	51.1	62	19.1	58.6	93	17.3	46.6
75-79	159	18.5	69.6	63	19.4	78.1	96	17.9	64.4
80-84	133	15.4	85.0	43	13.3	91.4	90	16.8	81.2
85+	129	15.0	100.0	28	8.6	100.0	101	18.8	100.0
All ages	861	100.0		324	100.0		537	100.0	

Included in the statistics are 23.6% multiple primaries in males and 18.3% in females.

Table 14

Age-specific mortality (cancer-related) and proportion of all cancers
for period 1998-2012
(**incl. multiple primaries**)

Age at death Years	Males n	Females n	Males Age-spec. mortal.	MI-index	Females Age-spec. mortal.	MI-index	Males Prop.all cancers %	Females Prop.all cancers %
0- 4			0.0		0.0			
5- 9			0.0		0.0			
10-14			0.0		0.0			
15-19		1	0.0		0.1	0.03		2.9
20-24			0.0		0.0			
25-29		2	0.0		0.1	0.01		1.8
30-34		1	0.0		0.0	0.00		0.5
35-39	4		0.2	0.04	0.0		1.0	
40-44		4	0.0		0.2	0.01		0.4
45-49	7	10	0.3	0.04	0.5	0.02	0.4	0.5
50-54	13	20	0.7	0.07	1.1	0.04	0.4	0.7
55-59	20	25	1.2	0.10	1.4	0.05	0.4	0.6
60-64	46	45	2.8	0.24	2.6	0.10	0.6	0.7
65-69	38	49	2.6	0.21	3.1	0.13	0.3	0.6
70-74	62	93	5.4	0.48	6.7	0.36	0.5	1.0
75-79	63	96	8.4	0.76	8.8	0.49	0.5	1.0
80-84	43	90	9.5	1.02	10.4	0.95	0.4	0.9
85+	28	101	9.0	1.12	12.3	1.15	0.3	0.8
All ages	324	537					0.4	0.8
Mortality								
Raw			1.2	0.21	1.9	0.13		
WS			0.6	0.15	0.7	0.07		
ES			0.9	0.18	1.1	0.08		
BRD-S			1.3	0.23	1.5	0.11		
PYLL-70								
per 100,000			4.9		6.7			
ES			4.2		5.8			
AYLL-70			9.4		10.4			

The rates underestimate the prognosis if other synchronous cancers are prognostic unfavorable.

Table 15a

Multiple primaries in deaths in period 1998-2012
MALES

Diagnosis	Total n	Total %↓	Pre n	Pre ←%	Syn-chron ±30d n	Syn-chron ±30d ←%	Post n	Post ←%
C03-C06 Oral cavity	2	1.2					2	100.0
C09-C10 Oropharynx	4	2.4	2	50.0			2	50.0
C12-C13 Hypopharynx	1	0.6	1	100.0				
C15 Oesophagus	6	3.6	2	33.3	1	16.7	3	50.0
C16 Stomach	4	2.4					4	100.0
C18 Colon	10	6.0	6	60.0	2	20.0	2	20.0
C19-C20 Rectum	7	4.2	2	28.6			5	71.4
C22 Liver	3	1.8					3	100.0
C23-C24 Bile	1	0.6					1	100.0
C25 Pancreas	3	1.8	1	33.3			2	66.7
C32 Larynx	5	3.0	3	60.0	1	20.0	1	20.0
C33-C34 Lung	23	13.7	3	13.0	1	4.3	19	82.6
C37 Thymus	1	0.6	1	100.0				
C38,C45 Mesothelioma	1	0.6					1	100.0
C43 Malign. melanoma	10	6.0	6	60.0			4	40.0
C44 Skin others	7	4.2	2	28.6	2	28.6	3	42.9
C46,C49 Soft tissue	2	1.2					2	100.0
C60 Penis	1	0.6					1	100.0
C61 Prostate	22	13.1	15	68.2			7	31.8
C62 Testis	1	0.6	1	100.0				
C64 Kidney	9	5.4	6	66.7			3	33.3
C67 Bladder	15	8.9	6	40.0	1	6.7	8	53.3
C69 Eye melanoma	2	1.2	2	100.0				
C70-C72 CNS cancer	2	1.2					2	100.0
C73 Thyroid	3	1.8			3	100.0		
C74-C80 Cancer others	1	0.6	1	100.0				
C76-C79 CUP	6	3.6	1	16.7	1	16.7	4	66.7
C81 Hodgkin lymphoma	1	0.6	1	100.0				
C82-C85 NHL	6	3.6	1	16.7			5	83.3
C90 Mult. myeloma	3	1.8	1	33.3			2	66.7
C91-C96 Leukaemia	6	3.6					6	100.0
All mult. primaries	168	100.0	64	38.1	12	7.1	92	54.8

Multiple primaries with number of cases n<1 are pooled in category "Other primaries".

ICD-10 C44 (Other malignant neoplasms of skin) is not systematically recorded by MCR and therefore not considered for evaluation as a particular primary but at least as a multiple malignancy.

Table 15b

Multiple primaries in deaths in period 1998-2012
FEMALES

Diagnosis		Total n	Total %↓	Pre n	Pre ←%	Syn-chron ±30d n	Syn-chron ±30d ←%	Post n	Post ←%
C15	Oesophagus	4	1.2					4	100.0
C16	Stomach	8	2.5	1	12.5			7	87.5
C18	Colon	19	5.8	7	36.8	2	10.5	10	52.6
C19-C20	Rectum	10	3.1	2	20.0	1	10.0	7	70.0
C22	Liver	7	2.1	1	14.3	1	14.3	5	71.4
C25	Pancreas	7	2.1					7	100.0
C32	Larynx	3	0.9	1	33.3	1	33.3	1	33.3
C33-C34	Lung	35	10.7	4	11.4	6	17.1	25	71.4
C43	Malign. melanoma	8	2.5	4	50.0			4	50.0
C44	Skin others	4	1.2	1	25.0			3	75.0
C50	Breast	83	25.5	39	47.0			44	53.0
C53	Cervix uteri	3	0.9	3	100.0				
C54	Corpus uteri	9	2.8	6	66.7			3	33.3
C56	Ovary	20	6.1	4	20.0			16	80.0
C64	Kidney	20	6.1	10	50.0	1	5.0	9	45.0
C67	Bladder	9	2.8	2	22.2			7	77.8
C70-C72	CNS cancer	15	4.6	1	6.7	2	13.3	12	80.0
C73	Thyroid	3	0.9			2	66.7	1	33.3
C76-C79	CUP	7	2.1	1	14.3			6	85.7
C82-C85	NHL	9	2.8	3	33.3			6	66.7
C91-C96	Leukaemia	22	6.7					22	100.0
Other primaries		21	6.4	6	28.6	2	9.5	13	61.9
All mult. primaries		326	100.0	96	29.4	18	5.5	212	65.0

Multiple primaries with number of cases n<3 are pooled in category "Other primaries".

ICD-10 C44 (Other malignant neoplasms of skin) is not systematically recorded by MCR and therefore not considered for evaluation as a particular primary but at least as a multiple malignancy.

Table 16

Age-specific mortality (cancer-related) and proportion of all cancers
for period 1998-2012
(**Singular primaries only** *)

Age at death Years	Males n	Females n	Males Age-spec. mortal.	MI-index	Females Age-spec. mortal.	MI-index	Males Prop.all cancers %	Females Prop.all cancers %
0- 4			0.0		0.0			
5- 9			0.0		0.0			
10-14			0.0		0.0			
15-19			0.0		0.0			
20-24			0.0		0.0			
25-29		2	0.0		0.1	0.02		1.9
30-34		1	0.0		0.0	0.00		0.5
35-39	4		0.2	0.04	0.0		1.1	
40-44		2	0.0		0.1	0.00		0.2
45-49	6	9	0.3	0.04	0.4	0.02	0.4	0.6
50-54	9	20	0.5	0.05	1.1	0.05	0.3	0.8
55-59	18	18	1.1	0.10	1.0	0.04	0.4	0.5
60-64	35	35	2.1	0.21	2.0	0.09	0.5	0.7
65-69	28	43	1.9	0.21	2.7	0.13	0.3	0.7
70-74	54	81	4.7	0.53	5.9	0.38	0.6	1.1
75-79	50	72	6.6	0.89	6.6	0.46	0.5	0.9
80-84	32	73	7.0	1.03	8.5	1.09	0.4	0.9
85+	17	80	5.5	1.42	9.8	1.27	0.3	0.8
All ages	253	436					0.4	0.8
Mortality								
Raw			0.9	0.19	1.5	0.11		
WS			0.5	0.14	0.6	0.06		
ES			0.7	0.16	0.9	0.07		
BRD-S			1.0	0.21	1.2	0.10		
PYLL-70								
per 100,000			4.0		5.4			
ES			3.4		4.7			
AYLL-70			9.8		10.2			

* See corresponding tables with multiple primaries.

Table 17

Age-specific mortality (cancer-related) and proportion of all cancers
for period 1998-2012
(**Single primaries only** *)

Age at death Years	Males n	Females n	Males Age-spec. mortal.	MI-index	Females Age-spec. mortal.	MI-index	Males Prop.all cancers %	Females Prop.all cancers %
0- 4			0.0		0.0			
5- 9			0.0		0.0			
10-14			0.0		0.0			
15-19			0.0		0.0			
20-24			0.0		0.0			
25-29		2	0.0		0.1	0.02		2.1
30-34		1	0.0		0.0	0.00		0.6
35-39	4		0.2	0.04	0.0		1.2	
40-44		1	0.0		0.0	0.00		0.1
45-49	2	2	0.1	0.01	0.1	0.00	0.1	0.1
50-54	8	10	0.4	0.05	0.5	0.03	0.3	0.5
55-59	13	12	0.8	0.08	0.7	0.03	0.3	0.4
60-64	25	18	1.5	0.17	1.0	0.05	0.4	0.4
65-69	16	25	1.1	0.14	1.6	0.09	0.2	0.5
70-74	44	53	3.8	0.51	3.8	0.29	0.5	0.9
75-79	37	50	4.9	0.76	4.6	0.37	0.5	0.8
80-84	24	47	5.3	0.77	5.4	0.77	0.4	0.7
85+	13	64	4.2	1.18	7.8	1.05	0.3	0.7
All ages	186	285					0.4	0.6
Mortality								
Raw			0.7	0.15	1.0	0.08		
WS			0.3	0.11	0.4	0.04		
ES			0.5	0.13	0.6	0.05		
BRD-S			0.7	0.17	0.8	0.07		
PYLL-70								
per 100,000			2.8		2.9			
ES			2.5		2.6			
AYLL-70			10.4		10.1			

* See corresponding tables with multiple primaries.

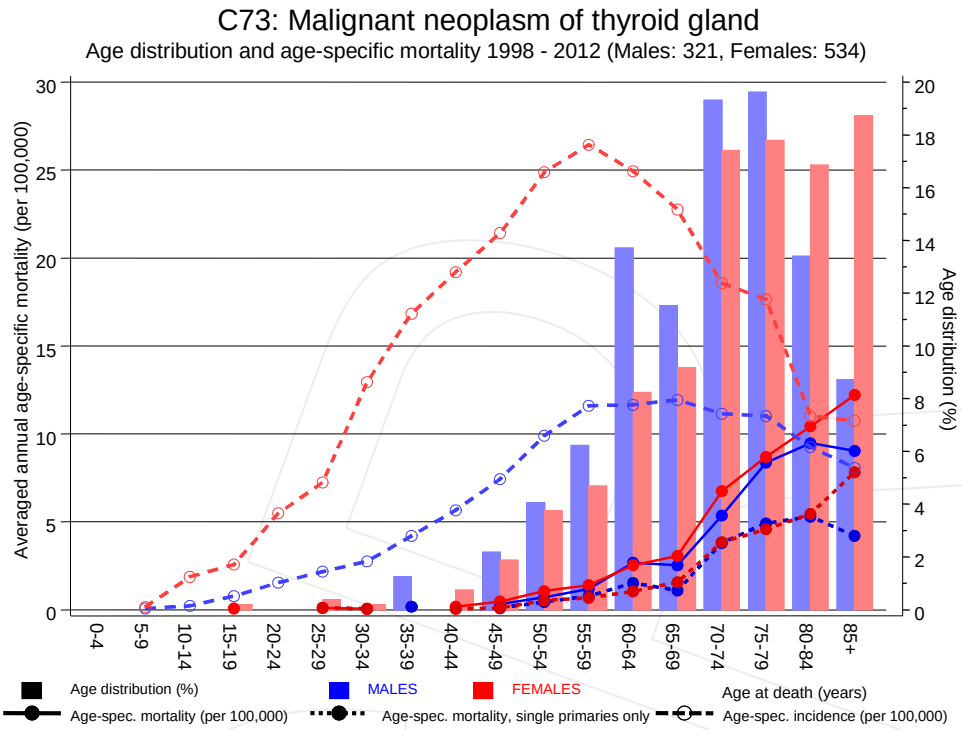
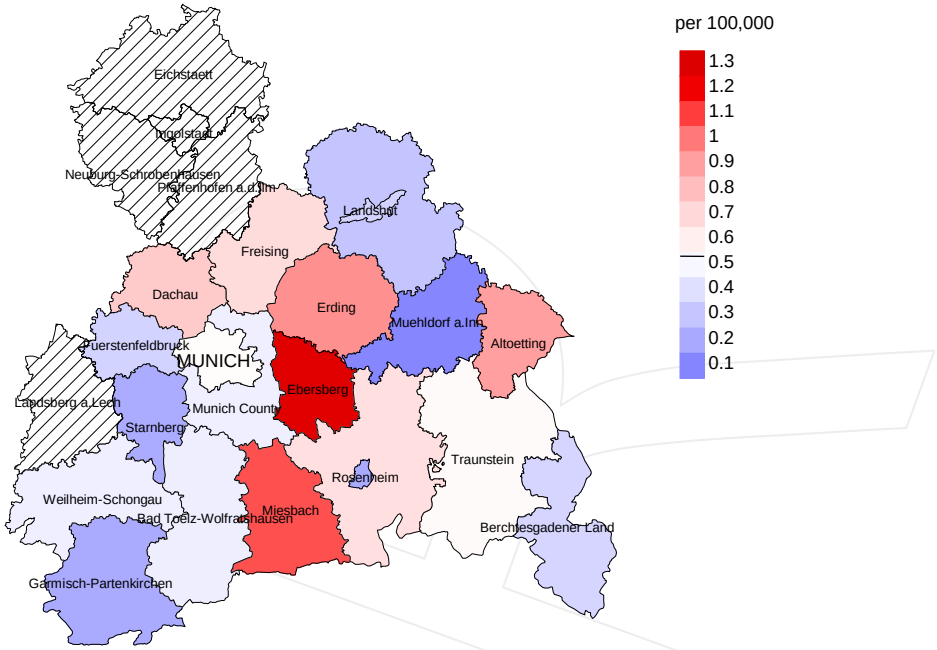


Figure 18. Distribution of age at death (bars) and age-specific mortality (all patients: solid line, patients with single primaries: dotted line). The age-specific incidence is additionally plotted for comparison (dashed line).

The difference between age at diagnosis (Table 3) and age at thyroid cancer-related death (see Table 10) should be considered.

Average mortality (world standard population) 2003 - 2008: Males



Average mortality (world standard population) 2003 - 2008: Females

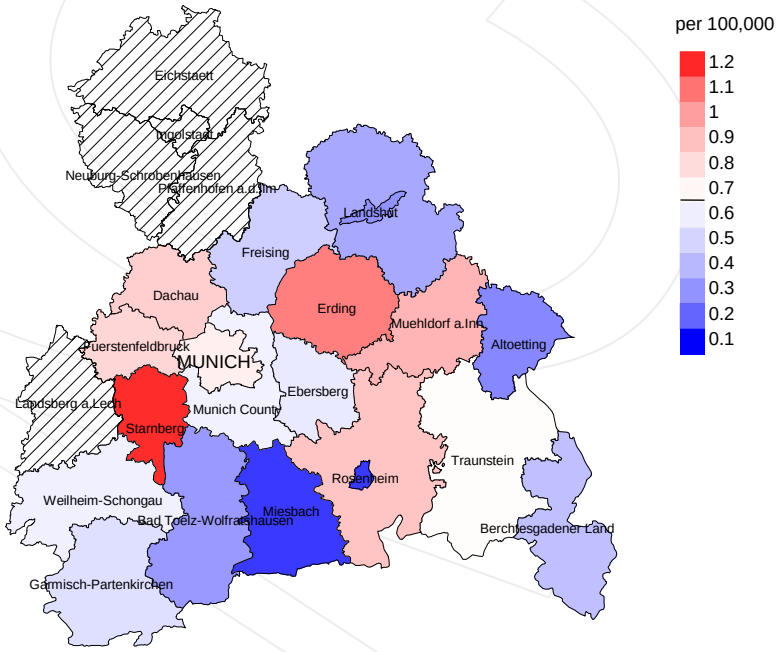
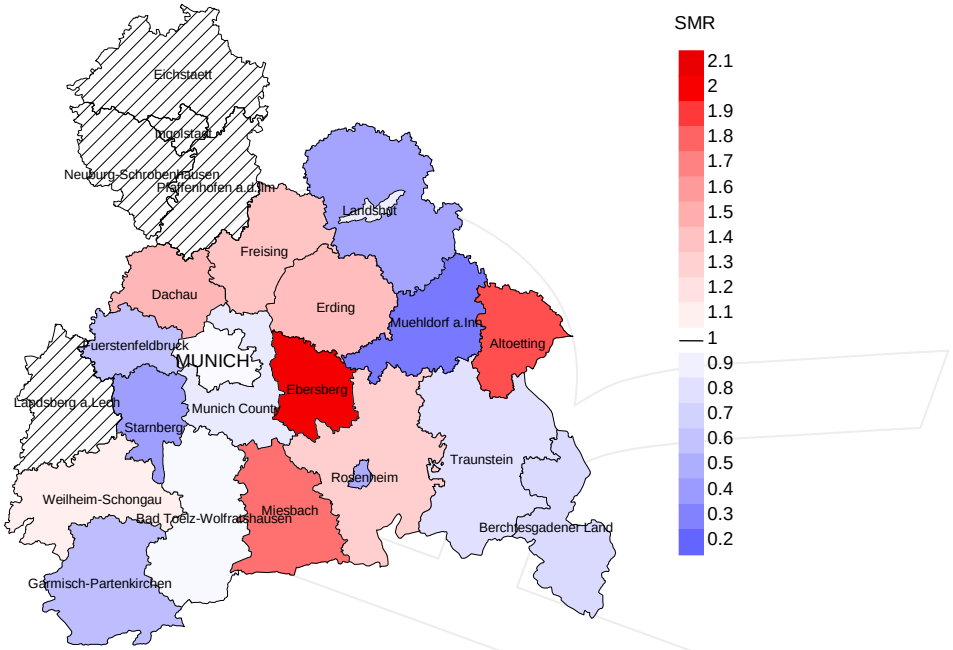


Figure 19a. Map of cancer mortality (world standard population) by county averaged for period 2003 to 2008. According to their individual mortality rates, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population mean (males 0.5/100,000 WS N=127, females 0.7/100,000 WS N=212). Since cancer data are not available in some counties until 2007, the local mortality rates were not calculated, and the map tiles show as shaded.

The results should be interpreted with caution! E.g., in county Ebersberg with a population of 63,131 female residents (averaged) in the period from 2003 to 2008 a total of 3 women died from thyroid cancer. Therefore, the mean mortality rate for this cancer type in this area can be calculated at 0.6/100,000 (world standard population). Though, the value of this parameter may vary with an underlying probability of 99% between 0.1 and 2.2/100,000.

Standardized mortality ratio (SMR) 2003 - 2008: Males



Standardized mortality ratio (SMR) 2003 - 2008: Females

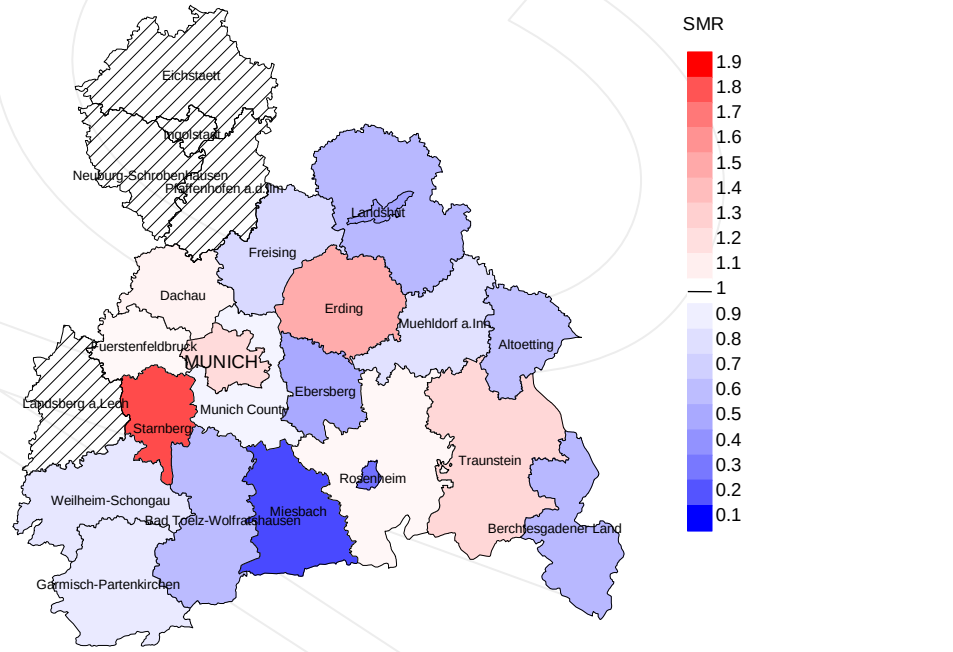


Figure 19b. Map of standardized mortality ratio (SMR, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual SMR values, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population overall of 1.0 (males N=127, females N=212). Since cancer data are not available in some counties until 2007, the local SMR values were not calculated, and the map tiles show as shaded.

The results should be interpreted with caution! E.g., in county Ebersberg with a population of 63,131 female residents (averaged) in the period from 2003 to 2008 a total of 3 women died from thyroid cancer. Therefore, the mean standardized mortality ratio (SMR) for this cancer type in this area can be calculated at 0.50. Though, the value of this parameter may vary with an underlying probability of 99% between 0.06 and 1.82, and is therefore not statistically striking.

Statistical Notes

In all tables and figures the respective reference values should be carefully considered. The incidence rates include diagnoses (with multiple primary), and death certificate only (DCO) cases. For mortality statistics patients, diagnoses and progressive course of disease are presented. In the calculations, all courses of disease are considered whereby progressions occurred and/or death certificate identified progressive cancers were ascertained. Additionally there are three groups of disease course to consider:

1. **All multiple primaries included**

   The mortality statistic describes the tumor-specific death, independent of any malignancy. The patient perspective, induced secondary malignancies, and the problem of multiple malignancies from the same primary tumor all have reasons for their inclusion.

2. **First singular primary** (no information about other prior or synchronous malignancy)

   The mortality statistic describes the tumor-related death for patients who have no therapeutic restrictions due to a previous or synchronous cancer. These statistics are comparable to studies that have exclusion criteria based on a second malignancy.

3. **Single primary** (no information about other prior, syn- or metachronous malignancy)

   The mortality statistic describes the tumor-specific death that occurs without any impact through secondary primaries, earlier, synchronous, later or induced. Precisely the difference between disease group 1 and 2 highlight the magnitude of the problem of secondary malignancies.

For this reason differences appear concerning official mono-causal mortality statistics. To judge the maximum deviation, 2 further tables are presented. In the first table the distribution of secondary malignancies before, at or after the described cancer are shown, that could be an alternative cause of death. In the second table, the age-specific mortality rates for all courses of disease, without designation of secondary malignancies are shown.

A previously minimally acknowledged statistic is the **age at death**, which allows for a good assessment of the quality of classification of the apparent tumor-specific death. For assumed tumor-independent deaths, the age of death should be estimated from the age of diagnosis and the normal life expectancy, whereas tumor-dependent deaths can be estimated from the age of diagnosis plus the average tumor-specific life expectancy. The comparison of different tumors demonstrates this association, if the causes of cancer and the competing cause of death are independent of each other (e.g. breast and colon versus head/neck and lung).

The index from mortality and incidence (Mortality-Incidence ratio, **MI-index**) is a statistic that allows for the evaluation of the quality of data. For diseases with poor prognoses, comparable values are obtained from all age groups, because to a large extent, the numerator and denominator contain the same cases. For tumors with a good prognosis, increasing and decreasing incidence and age-specific differences in prognosis can more strongly alter the MI- index. Additionally, attention should be paid to the confidence intervals where fewer cases are reported.

The complexity of problems identified here emphasizes the importance of relative survival data for the appropriate analysis of long term results.

As a measurement of the burden of disease, the number of potential life years loss due to premature deaths in a cohort can be calculated (**PYLL**, potential years of life lost, standardized per 100,000 persons or per European standard) as well as the average loss of life years per individual (**AYLL**, average years of life lost). Depending upon the analytic aim (health economy, prevention, health care research) different methods exist for the generation of these measurements. In the results presented here, the age for a premature death is considered to be before 70 years, according to the guidelines of the OECD and the WHO (as seen in the abbreviation PYLL-70 or AYLL-70).

Shortcuts

AYLL-70	Average years of life lost prior to age 70 given a person dies before that age
BRD-S	German standard population
DCO	Death certificate only
EAR	Excess absolute risk = excess cancer cases (O - E) per 10,000 person-years
ES	European standard population (old)
FRG	Federal Republic of Germany
GEKID	Association of Population-based Cancer Registries in Germany (Gesellschaft der epidemiologischen Krebsregister in Deutschland e.V.)
LCL	Lower confidence limit
MI-index	Ratio between mortality and incidence
MCR	Munich Cancer Registry (Tumorregister München)
PYLL-70	Potential years of life lost prior to age 70 given a person dies before that age
SEER	Surveillance, Epidemiology, and End Results (USA)
SIR	Standardized incidence ratio
SMR	Standardized mortality ratio
UCL	Upper confidence limit
WS	World standard population

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