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

C45-C49: Mesoth. and soft tissue ca.

Year of diagnosis	1998-2011
Patients	3357
Diseases	3365
Creation date	04/02/2013
Export date	01/03/2013
Population	4.5 m

http://www.tumorregister-muenchen.de/en/facts/base/base_C4549E.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, April 2013

[#] 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 2011 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.

ICD-10 codes used for specifying cancer site

ICD-10	Description
C45	Mesothelioma
C46	Kaposi's sarcoma
C47	Malignant neoplasm of peripheral nerves and autonomic nervous system
C48	Malignant neoplasm of retroperitoneum and peritoneum
C49	Malignant neoplasm of other connective and soft tissue

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	155	24	15.5	20.0	83.2	100.0
1999	153	17	11.1	29.4	69.9	98.7
2000	154	32	20.8	21.4	68.8	98.7
2001	138	23	16.7	9.4	71.0	97.8
2002	222	34	15.3	20.7	75.7	98.2
2003	239	31	13.0	22.2	74.1	97.1
2004	256	30	11.7	19.1	66.8	98.8
2005	266	16	6.0	19.9	65.8	94.4
2006	239	19	7.9	26.8	65.3	97.1
2007	325	17	5.2	21.5	58.8	85.2 ##
2008	323	16	5.0	21.4	63.2	82.0
2009	310	13	4.2	24.5	55.2	83.5
2010	307	17	5.5	25.4	50.2	91.2
2011	278	14	5.0	25.5	35.3	73.4 ###
1998-2011	3365	303	9.0	22.3	62.6	91.1

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	155	87	68	56.1
1999	153	88	65	57.5
2000	154	87	67	56.5
2001	138	70	68	50.7
2002	222	130	92	58.6
2003	239	123	116	51.5
2004	256	166	90	64.8
2005	266	150	116	56.4
2006	239	143	96	59.8
2007	325	178	147	54.8
2008	323	182	141	56.3
2009	310	172	138	55.5
2010	307	166	141	54.1
2011	278	150	128	54.0
1998-2011	3365	1892	1473	56.2

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	87	68	7.9	5.8	5.5	3.4	7.2	4.3	8.6	5.1
1999	88	65	7.9	5.5	5.4	3.3	7.1	4.3	8.5	5.0
2000	87	67	7.6	5.6	5.3	3.5	6.9	4.2	8.2	5.0
2001	70	68	6.0	5.6	4.2	3.3	5.7	4.4	6.7	5.1
2002	130	92	7.0	4.7	4.9	2.8	6.2	3.6	7.4	4.2
2003	123	116	6.6	5.9	4.3	3.3	5.7	4.3	6.9	5.1
2004	166	90	8.8	4.6	5.7	2.9	7.4	3.5	8.7	4.0
2005	150	116	7.9	5.8	5.5	3.6	6.8	4.4	7.8	5.2
2006	143	96	7.5	4.8	4.5	2.9	6.1	3.7	7.7	4.3
2007	178	147	8.0	6.4	5.0	3.5	6.5	4.5	7.9	5.3
2008	182	141	8.2	6.1	4.8	3.3	6.5	4.3	7.8	5.1
2009	172	138	7.7	5.9	4.3	3.2	5.9	4.4	7.5	5.2
2010	166	141	7.4	6.0	4.5	3.1	5.9	4.1	7.1	5.0
2011	150	128	6.7	5.5	3.8	2.9	5.1	3.8	6.4	4.5
1998-2011	1892	1473	7.5	5.6	4.8	3.2	6.3	4.1	7.6	4.8

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	155	61.2	19.9	0.4	93.2	33.1	53.1	64.7	75.4	85.0
1999	153	61.7	16.3	3.5	97.4	39.8	52.9	64.2	73.0	78.9
2000	154	60.5	21.9	0.2	97.1	28.9	51.7	62.6	78.0	85.6
2001	138	61.6	16.3	11.8	95.4	40.6	51.1	62.6	73.1	82.3
2002	222	60.9	20.5	0.0	93.0	31.8	50.3	65.1	75.3	82.9
2003	239	62.7	19.5	2.6	92.5	31.4	54.6	66.2	77.0	83.4
2004	256	61.8	19.3	0.0	96.1	34.7	54.4	66.5	73.9	81.9
2005	266	60.4	20.5	0.2	92.0	31.7	50.9	65.0	74.1	82.3
2006	239	63.2	18.9	0.3	103	36.9	55.1	66.1	77.2	82.7
2007	325	63.6	18.5	0.1	96.4	39.2	58.2	68.0	75.7	81.2
2008	323	64.8	18.1	0.0	101	39.9	57.1	68.9	76.1	83.4
2009	310	65.8	16.6	0.2	94.3	42.4	58.7	68.5	77.6	83.4
2010	307	64.3	18.9	0.1	97.3	36.5	55.8	69.0	76.7	83.1
2011	278	65.0	17.3	0.0	95.8	39.7	57.7	69.6	76.7	83.5
1998-2011	3365	63.0	18.8	0.0	103	36.7	55.0	67.0	75.9	82.8

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	87	59.7	19.1	0.4	90.8	33.0	51.1	63.3	72.4	82.5
1999	88	61.4	16.7	3.5	97.4	39.4	54.5	63.4	72.1	78.4
2000	87	60.4	21.3	0.2	92.9	29.2	53.1	62.0	78.0	85.6
2001	70	61.9	16.9	11.8	95.4	41.8	51.5	63.7	73.6	81.7
2002	130	59.5	21.4	0.1	92.4	30.5	48.5	64.6	74.3	82.4
2003	123	61.1	19.5	7.6	90.3	31.0	53.4	66.2	74.8	82.7
2004	166	62.2	18.0	0.0	90.7	39.0	56.0	66.8	72.7	79.5
2005	150	59.0	20.1	0.2	90.9	35.0	50.5	64.1	71.7	80.7
2006	143	63.9	17.6	0.3	90.3	39.3	56.3	67.3	76.8	81.9
2007	178	63.0	19.2	0.1	96.4	36.8	57.8	68.2	74.9	79.6
2008	182	64.6	17.2	0.0	95.2	42.1	59.8	68.3	74.1	82.0
2009	172	66.4	17.7	0.2	93.0	41.4	60.3	69.6	79.1	83.7
2010	166	63.1	19.8	0.1	92.7	35.1	54.4	68.1	76.1	83.1
2011	150	64.5	17.1	0.0	87.0	38.4	57.1	69.8	76.0	80.4
1998-2011	1892	62.5	18.8	0.0	97.4	36.5	55.2	66.9	74.5	81.9

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	68	63.0	20.9	3.4	93.2	33.1	54.6	67.2	77.6	85.2
1999	65	62.2	15.8	17.4	88.4	40.1	50.8	64.6	74.1	81.3
2000	67	60.6	22.7	0.4	97.1	28.1	46.9	64.9	78.0	87.6
2001	68	61.3	15.8	21.1	85.9	39.8	50.2	61.8	73.1	82.8
2002	92	62.8	19.0	0.0	93.0	39.0	53.4	65.8	76.3	83.4
2003	116	64.3	19.5	2.6	92.5	36.6	55.0	66.7	78.9	84.0
2004	90	61.0	21.6	0.2	96.1	28.2	51.1	65.9	76.6	84.0
2005	116	62.2	21.0	1.1	92.0	28.7	52.6	67.6	77.8	82.6
2006	96	62.1	20.6	1.6	103	34.2	54.1	64.4	78.2	83.9
2007	147	64.5	17.8	0.3	89.4	42.1	58.3	67.5	76.8	82.3
2008	141	65.0	19.2	4.4	101	36.3	55.0	69.6	79.3	86.2
2009	138	65.0	15.2	2.2	94.3	43.8	57.7	66.5	76.7	83.2
2010	141	65.7	17.7	0.9	97.3	40.8	56.4	70.1	77.4	83.0
2011	128	65.7	17.7	0.0	95.8	41.1	58.0	69.3	78.1	85.2
1998-2011	1473	63.6	18.8	0.0	103	37.6	54.6	67.3	77.2	83.9

Table 4

Age distribution by 5-year age group and gender for period 1998-2011 (incl. DCO)

Age at diagnosis Years	Cases n	%	Cum.%	Males n	%	Cum.%	Females n	%	Cum.%
0-4	68	2.0	2.0	46	2.4	2.4	22	1.5	1.5
5-9	21	0.6	2.6	13	0.7	3.1	8	0.5	2.0
10-14	20	0.6	3.2	10	0.5	3.6	10	0.7	2.7
15-19	26	0.8	4.0	13	0.7	4.3	13	0.9	3.6
20-24	28	0.8	4.8	15	0.8	5.1	13	0.9	4.5
25-29	50	1.5	6.3	23	1.2	6.3	27	1.8	6.3
30-34	85	2.5	8.9	48	2.5	8.9	37	2.5	8.8
35-39	110	3.3	12.1	68	3.6	12.5	42	2.9	11.7
40-44	128	3.8	15.9	67	3.5	16.0	61	4.1	15.8
45-49	124	3.7	19.6	63	3.3	19.3	61	4.1	20.0
50-54	180	5.3	25.0	100	5.3	24.6	80	5.4	25.4
55-59	282	8.4	33.3	154	8.1	32.8	128	8.7	34.1
60-64	363	10.8	44.1	216	11.4	44.2	147	10.0	44.1
65-69	495	14.7	58.8	304	16.1	60.3	191	13.0	57.0
70-74	478	14.2	73.0	299	15.8	76.1	179	12.2	69.2
75-79	395	11.7	84.8	207	10.9	87.0	188	12.8	81.9
80-84	297	8.8	93.6	147	7.8	94.8	150	10.2	92.1
85+	215	6.4	100.0	99	5.2	100.0	116	7.9	100.0
All ages	3365	100.0		1892	100.0		1473	100.0	

Included in the statistics are 26.1% multiple primaries in males and 29.2% in females.

Table 5

Age-specific incidence, DCO rate and proportion of all cancers
for period 1998-2011

Age at diagnosis Years	Males n	Females n	Males Age-spec. incid.	Females Age-spec. incid.	Males DCO rate n=177 %	Females DCO rate n=126 %	Males Prop.all cancers n=132509 %	Females Prop.all cancers n=129521 %
0- 4	46	22	3.6	1.8	4.3		16.3	10.6
5- 9	13	8	1.0	0.7			8.4	7.7
10-14	10	10	0.8	0.8			7.5	6.6
15-19	13	13	1.0	1.0	7.7	7.7	4.5	5.4
20-24	15	13	1.0	0.9	6.7		3.0	3.0
25-29	23	27	1.4	1.6			2.9	2.9
30-34	48	37	2.5	2.0	2.1	2.7	3.7	2.1
35-39	68	42	3.1	2.0	7.4	2.4	3.4	1.3
40-44	67	61	3.0	2.9	1.5	3.3	2.4	1.2
45-49	63	61	3.2	3.2	9.5	3.3	1.4	0.8
50-54	100	80	6.0	4.7	9.0	3.8	1.4	0.9
55-59	154	128	9.9	7.8	8.4	5.5	1.2	1.1
60-64	216	147	14.2	9.2	7.4	2.7	1.1	1.0
65-69	304	191	22.3	12.8	7.6	2.6	1.3	1.2
70-74	299	179	29.0	14.5	9.4	7.8	1.4	1.2
75-79	207	187	30.6	18.8	13.0	10.7	1.2	1.3
80-84	147	150	36.2	18.9	18.4	20.0	1.3	1.1
85+	99	116	35.7	15.6	17.2	31.0	1.2	0.8
All ages	1892	1472			9.4	8.6	1.4	1.1
Incidence								
Raw			7.5	5.6				
WS			4.8	3.2				
ES			6.3	4.1				
BRD-S			7.6	4.8				

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 1998-2011
MALES

Diagnosis	Observed n	Expected n	SIR	LCL 95%	UCL 95%		EAR	DCO %
C03-C06 Oral cavity	2	0.4	5.0	0.6	18.1		4.6	
C09-C10 Oropharynx	2	0.5	4.0	0.5	14.4		4.3	
C15 Oesophagus	2	0.8	2.5	0.3	9.0		3.4	
C16 Stomach	5	2.0	2.5	0.8	5.7		8.4	
C17 Small intestine	2	0.2	9.7	1.2	35.1	#	5.1	
C18 Colon	9	4.7	1.9	0.9	3.6		12.1	
C19-C20 Rectum	4	2.7	1.5	0.4	3.8		3.8	
C22 Liver	3	1.3	2.4	0.5	6.9		4.9	33.3
C25 Pancreas	2	1.6	1.2	0.1	4.4		1.0	50.0
C33-C34 Lung	17	5.6	3.1	1.8	4.9	#	32.6	58.8
C43 Malign. melanoma	6	1.8	3.4	1.2	7.3	#	12.0	16.7
C46,C49 Soft tissue	3	0.3	11.4	2.4	33.3	#	7.8	
C61 Prostate	20	13.9	1.4	0.9	2.2		17.5	5.0
C64 Kidney	7	1.6	4.3	1.7	8.8	#	15.3	
C67 Bladder	4	2.0	2.0	0.5	5.1		5.6	
C70-C72 CNS cancer	2	0.7	3.1	0.4	11.0		3.8	50.0
C82-C85 NHL	6	1.8	3.3	1.2	7.2	#	11.9	
C91-C96 Leukaemia	4	0.7	5.4	1.5	13.7	#	9.3	
Other primaries	10	2.9	3.4	1.6	6.3	#	20.2	
Not observed	0	2.0	0.0	0.0	1.9		-5.6	
All mult. primaries	110	47.5	2.3	1.9	2.8	#	178.1	13.6

Patients	1337
Mean age at second malignancy (years)	68.4
Person-years	3508
Mean observation time (years)	2.6
Median observation time (years)	1.5

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 1998-2011
FEMALES

Diagnosis		Observed n	Expected n	SIR	LCL 95%	UCL 95%		EAR	DCO %
C18	Colon	3	2.9	1.0	0.2	3.1		0.4	
C19-C20	Rectum	6	1.3	4.7	1.7	10.3	#	15.2	
C25	Pancreas	2	1.2	1.7	0.2	6.1		2.6	50.0
C33-C34	Lung	6	2.0	3.0	1.1	6.6	#	12.9	33.3
C43	Malign. melanoma	3	1.0	2.9	0.6	8.5		6.3	
C46,C49	Soft tissue	3	0.2	18.0	3.7	52.5	#	9.1	33.3
C50	Breast	18	8.9	2.0	1.2	3.2	#	29.1	5.6
C53	Cervix uteri	2	0.4	4.5	0.5	16.2		5.0	
C54	Corpus uteri	5	1.6	3.1	1.0	7.3	#	10.9	
C56	Ovary	20	1.2	16.3	9.9	25.1	#	60.3	75.0
C64	Kidney	5	0.7	7.0	2.3	16.4	#	13.8	
C70-C72	CNS cancer	2	0.4	4.7	0.6	17.0		5.1	
C73	Thyroid	2	0.6	3.3	0.4	12.1		4.5	
C82-C85	NHL	3	1.1	2.8	0.6	8.2		6.2	
C91-C96	Leukaemia	2	0.4	4.6	0.6	16.5		5.0	
Other primaries		6	1.9	3.2	1.2	7.0	#	13.3	16.7
Not observed		0	3.2	0.0	0.0	1.2		-10.2	
All mult. primaries		88	29.0	3.0	2.4	3.7	#	189.4	23.9

Patients	998
Mean age at second malignancy (years)	70.6
Person-years	3115
Mean observation time (years)	3.1
Median observation time (years)	2.0

The occurrence of second malignancy is statistically significant.

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

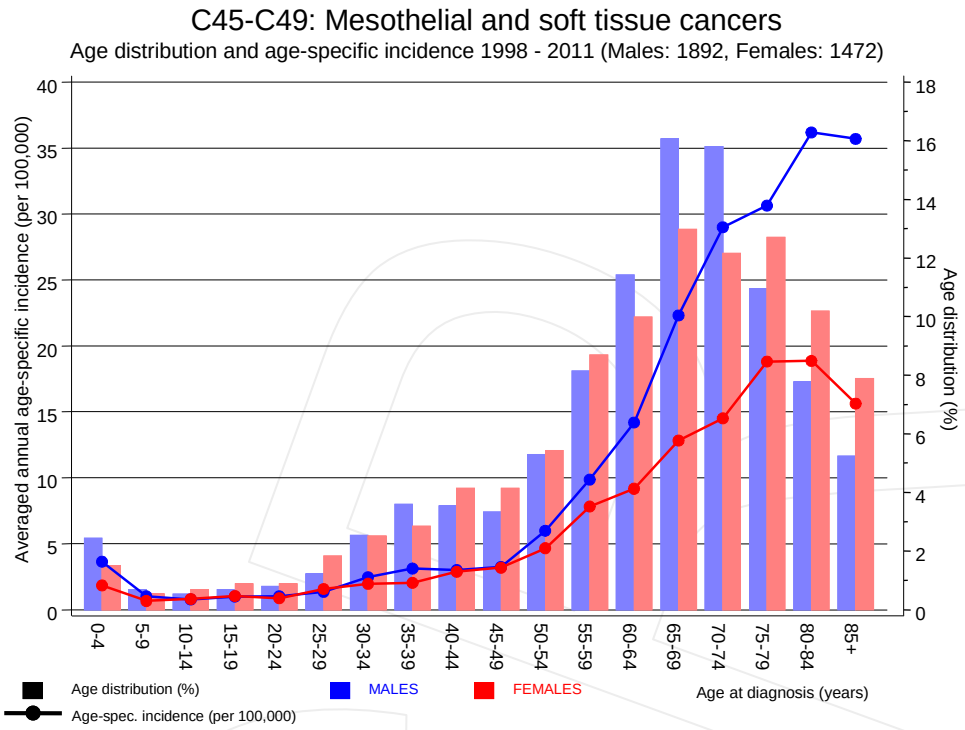


Figure 7. Age distribution and age-specific incidence

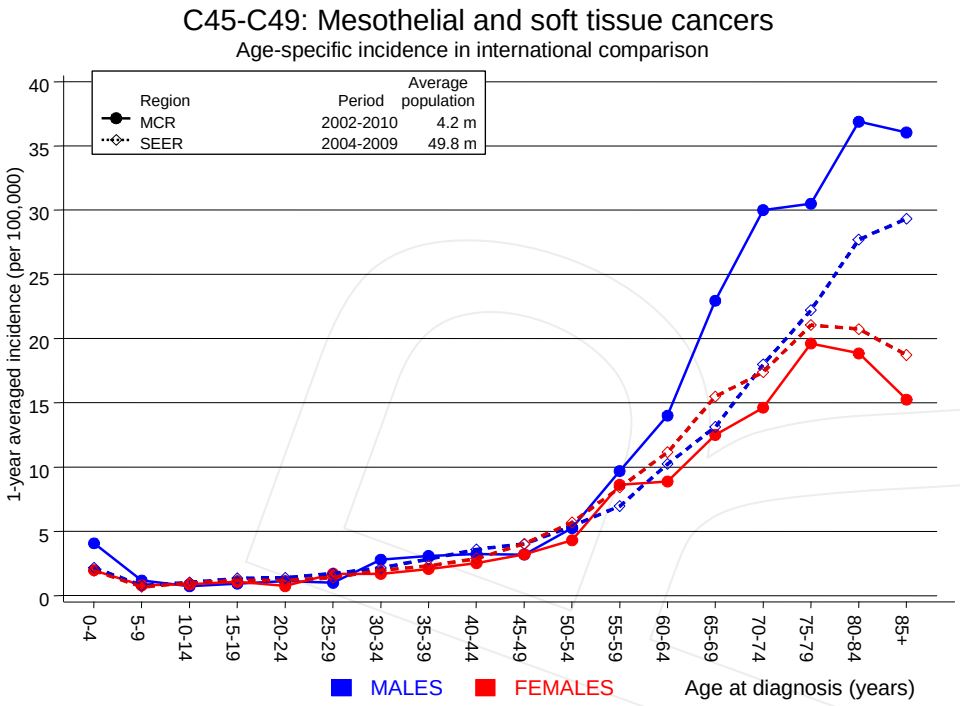


Figure 7a. Age-specific incidence in MCR registry areas compared to SEER (Surveillance, Epidemiology, and End Results, USA).

Reference:

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.

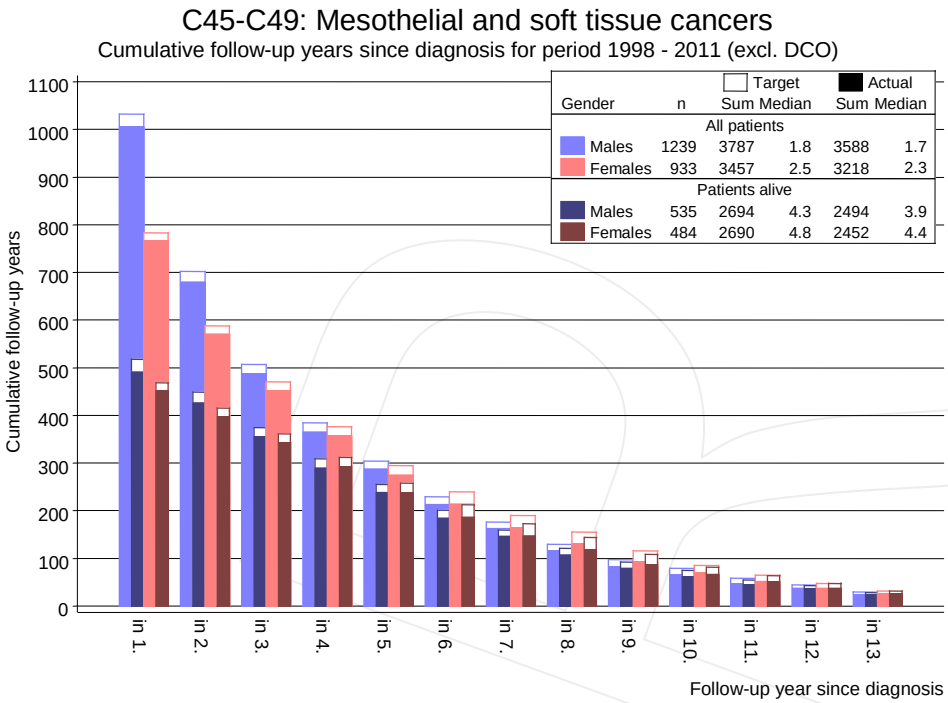
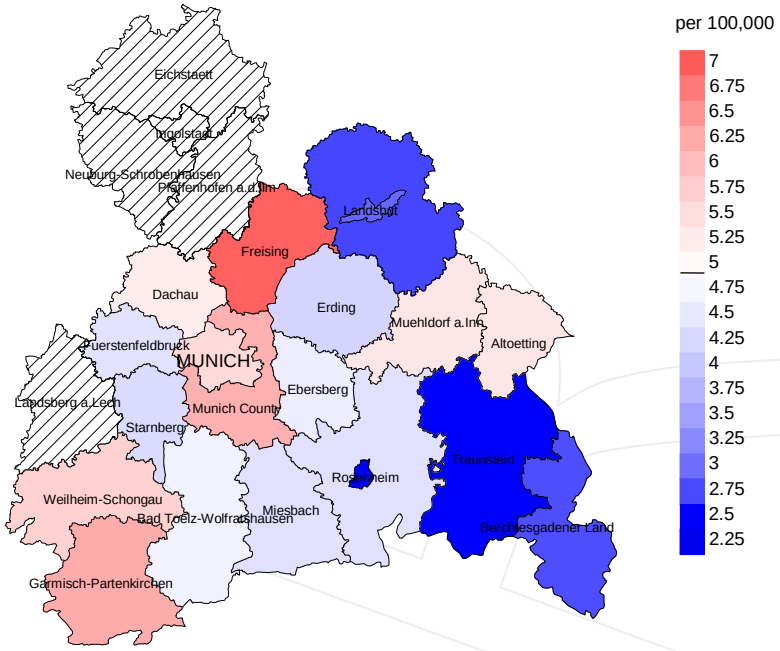


Figure 8. Cumulative follow-up years depending on time since diagnosis

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

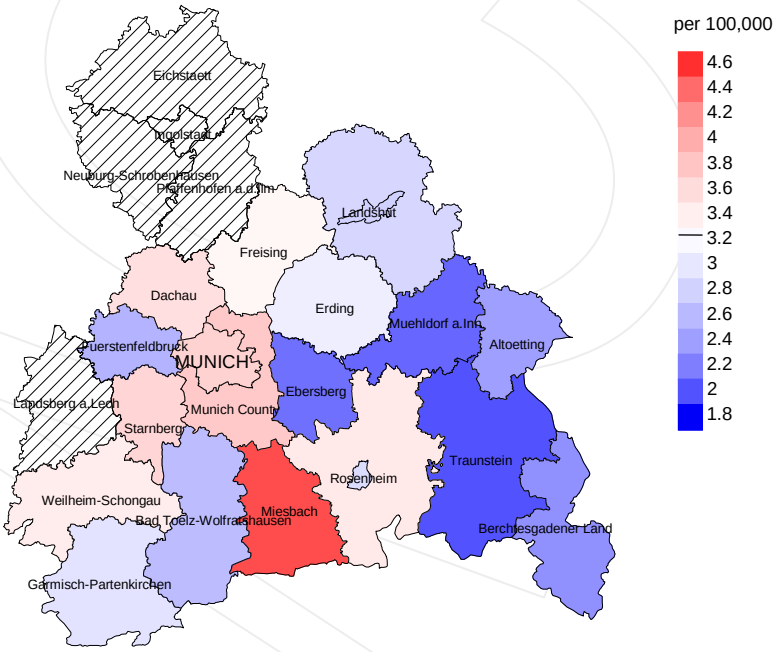
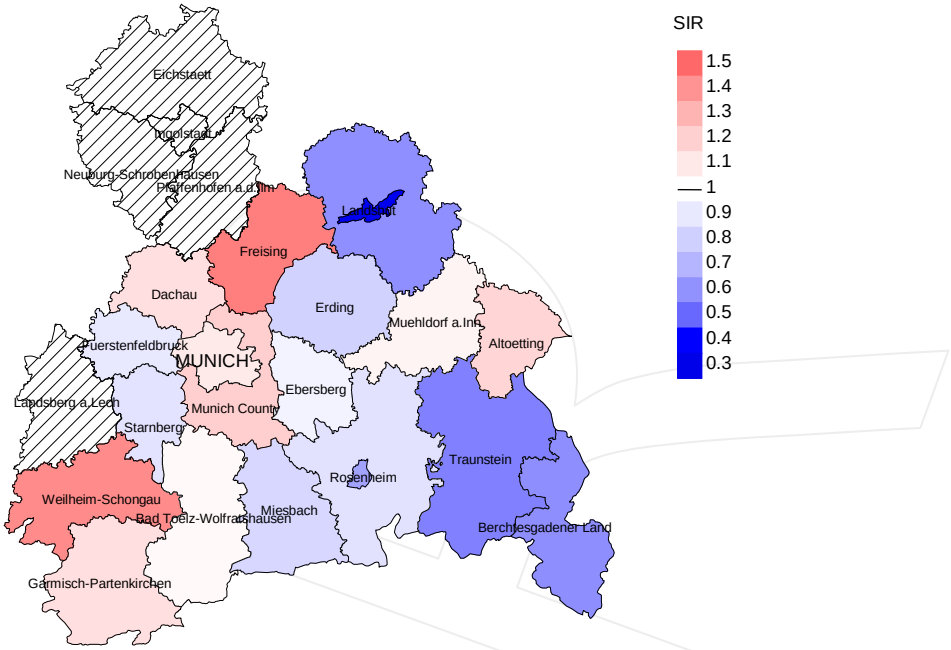


Figure 9a. Map of cancer incidence (world standard population, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual incidence rates, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population mean (males 4.9/100,000 WS N=891, females 3.3/100,000 WS N=670). 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 14 women were identified with newly diagnosed mesoth. and soft tissue ca.. Therefore, the mean incidence rate for this cancer type in this area can be calculated at 2.1/100,000 (world standard population). Though, the value of this parameter may vary with an underlying probability of 99% between 0.7 and 5.3/100,000.

Standardized incidence ratio (SIR) 2003 - 2008: Males



Standardized incidence ratio (SIR) 2003 - 2008: Females

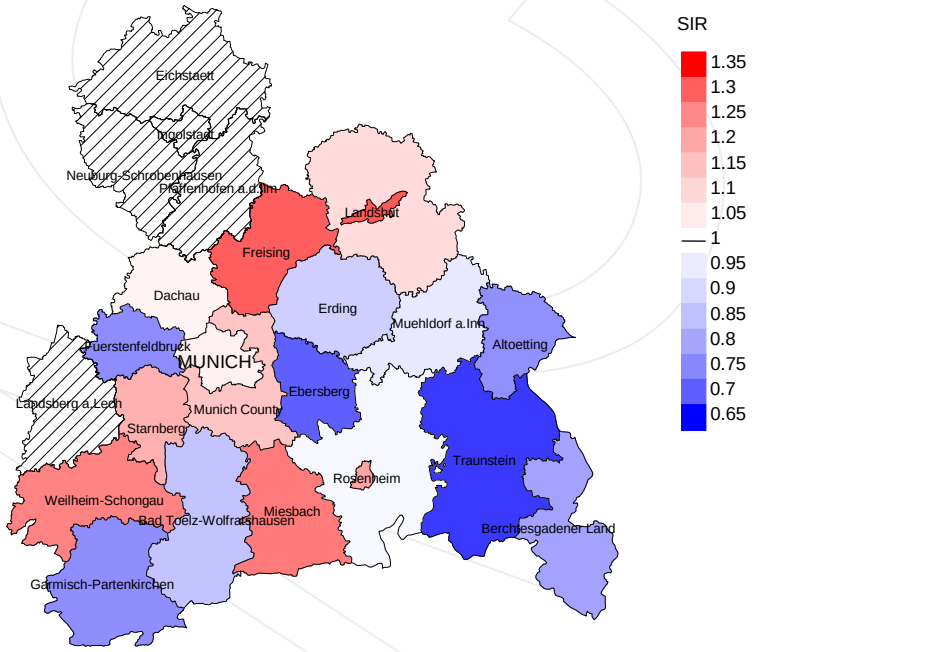


Figure 9b. Map of standardized incidence ratio (SIR, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual SIR values, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population overall of 1.0 (males N=891, females N=670). 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 14 women were identified with newly diagnosed mesoth. and soft tissue ca.. Therefore, the mean standardized incidence ratio (SIR) for this cancer type in this area can be calculated at 0.70. Though, the value of this parameter may vary with an underlying probability of 99% between 0.31 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	155	100.0	15.5	129	83.2	94.6
1999	153	98.7	11.1	107	69.9	93.5
2000	154	98.7	20.8	106	68.8	97.2
2001	138	97.8	16.7	98	71.0	94.9
2002	222	98.2	15.3	168	75.7	95.2
2003	239	97.1	13.0	177	74.1	95.5
2004	256	98.8	11.7	171	66.8	98.2
2005	266	94.4	6.0	175	65.8	98.3
2006	239	97.1	7.9	156	65.3	98.7
2007	325	85.2	5.2	191	58.8	98.4
2008	323	82.0	5.0	204	63.2	98.5
2009	310	83.5	4.2	171	55.2	97.1
2010	307	91.2	5.5	154	50.2	98.7
2011	278	73.4	5.0	98	35.3	96.9
1998-2011	3365	91.1	9.0	2105	62.6	97.1

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	155	116	94.8	45	29.0
1999	153	95	91.6	31	20.3
2000	154	110	94.5	37	24.0
2001	138	103	94.2	37	26.8
2002	222	145	96.6	62	27.9
2003	239	137	93.4	63	26.4
2004	256	170	97.1	60	23.4
2005	266	176	97.7	55	20.7
2006	239	175	96.6	51	21.3
2007	325	198	98.0	60	18.5
2008	323	196	98.5	67	20.7
2009	310	230	97.8	61	19.7
2010	307	237	98.7	63	20.5
2011	278	225	99.1	67	24.1
1998-2011	3365	2313	96.9	759	22.6

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	116	76.7	23.3	93.6
1999	95	83.2	16.8	95.4
2000	110	86.4	13.6	96.2
2001	103	91.3	8.7	97.9
2002	145	84.8	15.2	93.6
2003	137	88.3	11.7	91.4
2004	170	86.5	13.5	92.7
2005	176	89.8	10.2	92.4
2006	175	88.0	12.0	91.1
2007	198	87.4	12.6	94.3
2008	196	90.3	9.7	92.7
2009	230	87.4	12.6	90.7
2010	237	89.5	10.5	91.5
2011	225	88.4	11.6	92.4
1998-2011	2313	87.4	12.6	92.9

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	69	66.1	64.9	70.0	65.5
1999	62	63.8	62.4	71.9	63.6
2000	63	65.5	64.6	71.7	65.1
2001	55	63.2	62.3	70.1	64.2
2002	89	67.7	67.1	71.0	67.1
2003	75	67.8	65.5	84.9	65.3
2004	101	66.5	65.4	73.3	66.8
2005	108	67.0	66.5	71.3	66.5
2006	102	69.9	69.7	71.0	70.1
2007	131	67.8	67.1	73.4	66.9
2008	121	71.0	70.2	78.4	69.7
2009	134	71.7	70.0	81.3	70.5
2010	135	73.4	72.6	79.2	72.7
2011	132	71.7	71.2	76.3	71.4
1998-2011	1377	68.8	67.9	74.9	68.2

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	47	70.4	66.6	82.9	69.7
1999	33	63.9	63.2	66.2	64.7
2000	47	71.8	72.4	67.8	71.5
2001	48	65.3	65.6	61.5	66.1
2002	56	66.1	64.2	79.7	65.9
2003	62	68.0	66.2	82.1	68.1
2004	69	70.3	68.0	85.2	67.9
2005	68	71.4	70.6	78.4	71.2
2006	73	72.1	70.2	84.1	71.9
2007	67	72.2	71.6	75.7	71.6
2008	75	73.4	71.4	90.0	71.5
2009	96	72.5	71.5	81.9	72.3
2010	102	71.5	70.3	87.5	70.5
2011	93	74.9	74.2	79.3	74.6
1998-2011	936	70.9	69.7	79.8	70.4

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	53	4.8	0.61	3.1	0.56	4.4	0.60	5.3	0.62
1999	53	4.7	0.60	3.2	0.60	4.3	0.61	5.2	0.62
2000	55	4.8	0.63	3.1	0.58	4.3	0.62	5.2	0.63
2001	49	4.2	0.70	2.8	0.66	3.7	0.65	4.4	0.66
2002	74	4.0	0.57	2.3	0.47	3.4	0.54	4.2	0.57
2003	66	3.5	0.54	2.2	0.50	3.0	0.52	3.8	0.55
2004	87	4.6	0.52	2.8	0.49	3.8	0.52	4.9	0.57
2005	97	5.1	0.65	3.0	0.54	4.1	0.60	5.2	0.67
2006	91	4.8	0.64	2.5	0.56	3.7	0.60	4.9	0.64
2007	116	5.2	0.65	2.9	0.57	4.1	0.63	5.2	0.67
2008	110	4.9	0.60	2.5	0.51	3.7	0.57	4.9	0.64
2009	114	5.1	0.66	2.4	0.58	3.7	0.62	4.8	0.64
2010	117	5.2	0.70	2.4	0.53	3.7	0.62	5.0	0.71
2011	119	5.3	0.79	2.5	0.65	3.8	0.74	5.2	0.82
1998-2011	1201	4.8	0.63	2.6	0.55	3.8	0.61	4.9	0.65

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	36	3.1	0.53	1.6	0.48	2.2	0.51	2.8	0.54
1999	26	2.2	0.40	1.4	0.41	1.7	0.39	2.0	0.40
2000	40	3.3	0.60	1.3	0.37	2.0	0.46	2.7	0.54
2001	45	3.7	0.66	2.0	0.60	2.6	0.60	3.2	0.64
2002	49	2.5	0.53	1.5	0.52	1.8	0.52	2.2	0.53
2003	55	2.8	0.47	1.5	0.44	1.9	0.43	2.3	0.45
2004	60	3.0	0.67	1.4	0.49	2.1	0.58	2.6	0.65
2005	61	3.1	0.53	1.3	0.37	1.9	0.44	2.5	0.48
2006	63	3.1	0.66	1.4	0.48	2.0	0.54	2.6	0.61
2007	57	2.5	0.39	1.0	0.28	1.5	0.33	2.0	0.38
2008	67	2.9	0.48	1.2	0.36	1.7	0.40	2.2	0.43
2009	87	3.7	0.63	1.6	0.50	2.3	0.52	3.0	0.57
2010	95	4.1	0.67	1.8	0.57	2.5	0.61	3.3	0.65
2011	80	3.4	0.63	1.2	0.42	1.9	0.49	2.6	0.58
1998-2011	821	3.1	0.56	1.4	0.45	2.0	0.49	2.6	0.53

Table 13

Age distribution of age at death (cancer-related) for period 1998-2011
(**incl. multiple primaries**)

Age at death Years	Cases n	%	Cum.%	Males n	%	Cum.%	Females n	%	Cum.%
0-4	9	0.4	0.4	7	0.6	0.6	2	0.2	0.2
5-9	10	0.5	0.9	4	0.3	0.9	6	0.7	1.0
10-14	4	0.2	1.1	3	0.2	1.2	1	0.1	1.1
15-19	7	0.3	1.5	3	0.2	1.4	4	0.5	1.6
20-24	14	0.7	2.2	6	0.5	1.9	8	1.0	2.5
25-29	19	0.9	3.1	11	0.9	2.8	8	1.0	3.5
30-34	23	1.1	4.2	14	1.2	4.0	9	1.1	4.6
35-39	25	1.2	5.5	16	1.3	5.3	9	1.1	5.7
40-44	48	2.4	7.8	25	2.1	7.4	23	2.8	8.5
45-49	48	2.4	10.2	30	2.5	9.9	18	2.2	10.7
50-54	73	3.6	13.8	46	3.8	13.7	27	3.3	13.9
55-59	133	6.5	20.3	80	6.6	20.3	53	6.4	20.4
60-64	217	10.7	31.0	135	11.2	31.5	82	9.9	30.3
65-69	322	15.8	46.9	225	18.6	50.1	97	11.8	42.1
70-74	328	16.1	63.0	220	18.2	68.4	108	13.1	55.2
75-79	305	15.0	78.0	168	13.9	82.3	137	16.6	71.8
80-84	254	12.5	90.5	123	10.2	92.5	131	15.9	87.6
85+	193	9.5	100.0	91	7.5	100.0	102	12.4	100.0
All ages	2032	100.0		1207	100.0		825	100.0	

Included in the statistics are 26.1% multiple primaries in males and 29.2% in females.

Table 14

Age-specific mortality (cancer-related) and proportion of all cancers
for period 1998-2011
(**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	7	2	0.6	0.15	0.2	0.09	24.1	9.1
5- 9	4	6	0.3	0.31	0.5	0.75	12.9	16.7
10-14	3	1	0.2	0.30	0.1	0.10	10.3	4.2
15-19	3	4	0.2	0.23	0.3	0.31	7.9	13.8
20-24	6	8	0.4	0.40	0.5	0.62	7.5	18.6
25-29	11	8	0.7	0.48	0.5	0.30	12.6	7.8
30-34	14	9	0.7	0.29	0.5	0.24	8.3	4.4
35-39	16	9	0.7	0.24	0.4	0.21	4.4	2.0
40-44	25	23	1.1	0.37	1.1	0.38	3.3	2.3
45-49	30	18	1.5	0.48	0.9	0.30	1.9	1.0
50-54	46	27	2.8	0.46	1.6	0.34	1.6	1.0
55-59	80	53	5.1	0.52	3.2	0.41	1.6	1.3
60-64	135	82	8.9	0.63	5.1	0.56	1.8	1.5
65-69	225	97	16.5	0.74	6.5	0.51	2.2	1.4
70-74	220	108	21.3	0.74	8.7	0.60	2.0	1.3
75-79	168	137	24.9	0.81	13.8	0.73	1.5	1.5
80-84	123	131	30.3	0.84	16.5	0.87	1.4	1.4
85+	91	102	32.8	0.92	13.7	0.88	1.3	0.9
All ages	1207	825					1.8	1.4
Mortality								
Raw			4.8	0.64	3.1	0.56		
WS			2.7	0.56	1.4	0.45		
ES			3.8	0.61	2.0	0.49		
BRD-S			5.0	0.65	2.6	0.53		
PYLL-70								
per 100,000			33.4		22.9			
ES			32.0		22.0			
AYLL-70			12.5		14.9			

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

Table 15a

Multiple primaries in deaths in period 1998-2011
MALES

Diagnosis	Total n	Total %↓	Pre n	Pre ←%	Syn-chron ±30d n	Syn-chron ±30d ←%	Post n	Post ←%
C09-C10 Oropharynx	6	1.7	3	50.0	1	16.7	2	33.3
C12-C13 Hypopharynx	3	0.8	2	66.7			1	33.3
C15 Oesophagus	5	1.4	1	20.0			4	80.0
C16 Stomach	11	3.1	8	72.7	1	9.1	2	18.2
C18 Colon	23	6.4	19	82.6	2	8.7	2	8.7
C19-C20 Rectum	21	5.9	16	76.2	1	4.8	4	19.0
C22 Liver	4	1.1	1	25.0	3	75.0		
C23-C24 Bile	3	0.8	1	33.3	1	33.3	1	33.3
C25 Pancreas	5	1.4	1	20.0	3	60.0	1	20.0
C33-C34 Lung	31	8.7	8	25.8	6	19.4	17	54.8
C38,C45 Mesothelioma	3	0.8					3	100.0
C40-C41 Bone	3	0.8	1	33.3			2	66.7
C43 Malign. melanoma	24	6.7	17	70.8	1	4.2	6	25.0
C44 Skin others	30	8.4	18	60.0			12	40.0
C46,C49 Soft tissue	5	1.4			1	20.0	4	80.0
C61 Prostate	58	16.2	43	74.1	3	5.2	12	20.7
C62 Testis	6	1.7	4	66.7			2	33.3
C64 Kidney	20	5.6	13	65.0	2	10.0	5	25.0
C67 Bladder	23	6.4	14	60.9	2	8.7	7	30.4
C70-C72 CNS cancer	9	2.5			2	22.2	7	77.8
C73 Thyroid	3	0.8	3	100.0				
C76-C79 CUP	6	1.7	4	66.7	1	16.7	1	16.7
C82-C85 NHL	23	6.4	10	43.5	4	17.4	9	39.1
C90 Mult. myeloma	5	1.4	2	40.0	2	40.0	1	20.0
C91-C96 Leukaemia	11	3.1	6	54.5	2	18.2	3	27.3
Other primaries	16	4.5	8	50.0			8	50.0
All mult. primaries	357	100.0	203	56.9	38	10.6	116	32.5

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 15b

Multiple primaries in deaths in period 1998-2011
FEMALES

Diagnosis		Total n	Total %↓	Pre n	Pre ←%	Syn-chron ±30d n	Syn-chron ±30d ←%	Post n	Post ←%
C16	Stomach	4	1.4	4	100.0				
C18	Colon	18	6.1	9	50.0	3	16.7	6	33.3
C19-C20	Rectum	4	1.4	1	25.0	1	25.0	2	50.0
C23-C24	Bile	2	0.7					2	100.0
C25	Pancreas	6	2.0			2	33.3	4	66.7
C33-C34	Lung	12	4.1	3	25.0	1	8.3	8	66.7
C40-C41	Bone	2	0.7	1	50.0			1	50.0
C43	Malign. melanoma	13	4.4	12	92.3	1	7.7		
C44	Skin others	14	4.7	6	42.9	4	28.6	4	28.6
C46,C49	Soft tissue	5	1.7			1	20.0	4	80.0
C48	Peritoneal	2	0.7					2	100.0
C50	Breast	83	28.0	64	77.1	2	2.4	17	20.5
C51	Vulva	2	0.7					2	100.0
C53	Cervix uteri	10	3.4	10	100.0				
C54	Corpus uteri	16	5.4	9	56.3	3	18.8	4	25.0
C56	Ovary	46	15.5	11	23.9	9	19.6	26	56.5
C64	Kidney	7	2.4	2	28.6	1	14.3	4	57.1
C65	Renal pelvis	2	0.7	2	100.0				
C67	Bladder	6	2.0	4	66.7			2	33.3
C70-C72	CNS cancer	7	2.4			1	14.3	6	85.7
C73	Thyroid	3	1.0	3	100.0				
C76-C79	CUP	2	0.7	2	100.0				
C81	Hodgkin lymphoma	2	0.7	2	100.0				
C82-C85	NHL	16	5.4	10	62.5	5	31.3	1	6.3
C90	Mult. myeloma	3	1.0	2	66.7			1	33.3
C91-C96	Leukaemia	3	1.0	1	33.3			2	66.7
Other primaries		6	2.0	1	16.7	3	50.0	2	33.3
All mult. primaries		296	100.0	159	53.7	37	12.5	100	33.8

Multiple primaries with number of cases n<2 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 1998-2011
(**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	7	2	0.6	0.16	0.2	0.09	29.2	9.1
5- 9	4	6	0.3	0.31	0.5	0.75	13.8	18.2
10-14	3	1	0.2	0.33	0.1	0.11	10.3	4.3
15-19	3	4	0.2	0.23	0.3	0.33	8.6	14.8
20-24	5	7	0.3	0.36	0.5	0.58	6.7	17.9
25-29	11	8	0.7	0.48	0.5	0.30	13.6	8.3
30-34	13	8	0.7	0.28	0.4	0.22	7.9	4.5
35-39	16	7	0.7	0.25	0.3	0.19	4.7	1.7
40-44	23	20	1.0	0.37	0.9	0.36	3.3	2.3
45-49	28	16	1.4	0.48	0.8	0.30	2.0	1.1
50-54	36	24	2.2	0.42	1.4	0.34	1.4	1.1
55-59	71	44	4.6	0.52	2.7	0.42	1.6	1.3
60-64	114	70	7.5	0.60	4.4	0.57	1.8	1.5
65-69	190	75	13.9	0.76	5.0	0.51	2.3	1.3
70-74	171	84	16.6	0.74	6.8	0.59	1.9	1.3
75-79	128	101	18.9	0.84	10.2	0.75	1.5	1.4
80-84	97	108	23.9	0.84	13.6	0.87	1.5	1.4
85+	68	78	24.5	0.87	10.5	0.86	1.2	0.8
All ages	988	663					1.8	1.3
Mortality								
Raw			3.9	0.62	2.5	0.55		
WS			2.2	0.54	1.2	0.44		
ES			3.2	0.59	1.6	0.48		
BRD-S			4.0	0.64	2.1	0.52		
PYLL-70								
per 100,000			30.2		20.3			
ES			29.2		19.8			
AYLL-70			13.1		15.7			

* See corresponding tables with multiple primaries.

Table 17

Age-specific mortality (cancer-related) and proportion of all cancers
for period 1998-2011
(**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	7	2	0.6	0.16	0.2	0.09	30.4	9.1
5- 9	4	6	0.3	0.31	0.5	0.75	14.3	18.8
10-14	3	1	0.2	0.33	0.1	0.11	10.3	4.5
15-19	3	4	0.2	0.23	0.3	0.33	8.6	17.4
20-24	5	6	0.3	0.36	0.4	0.50	7.1	16.7
25-29	11	8	0.7	0.50	0.5	0.30	14.7	8.9
30-34	13	8	0.7	0.29	0.4	0.24	8.2	4.9
35-39	14	7	0.6	0.23	0.3	0.21	4.3	1.8
40-44	21	19	0.9	0.36	0.9	0.35	3.2	2.4
45-49	26	16	1.3	0.47	0.8	0.31	2.0	1.2
50-54	34	22	2.0	0.43	1.3	0.33	1.5	1.1
55-59	65	42	4.2	0.50	2.6	0.43	1.6	1.4
60-64	112	64	7.4	0.64	4.0	0.56	1.9	1.6
65-69	178	66	13.1	0.76	4.4	0.49	2.4	1.3
70-74	153	69	14.8	0.73	5.6	0.54	2.1	1.3
75-79	116	91	17.2	0.83	9.2	0.75	1.7	1.5
80-84	86	95	21.2	0.80	11.9	0.82	1.6	1.5
85+	60	72	21.6	0.83	9.7	0.82	1.3	0.9
All ages	911	598					2.0	1.4
Mortality								
Raw			3.6	0.61	2.3	0.53		
WS			2.1	0.53	1.1	0.42		
ES			2.9	0.58	1.5	0.46		
BRD-S			3.7	0.63	1.9	0.51		
PYLL-70								
per 100,000			28.8		19.4			
ES			28.0		19.0			
AYLL-70			13.2		16.1			

* See corresponding tables with multiple primaries.

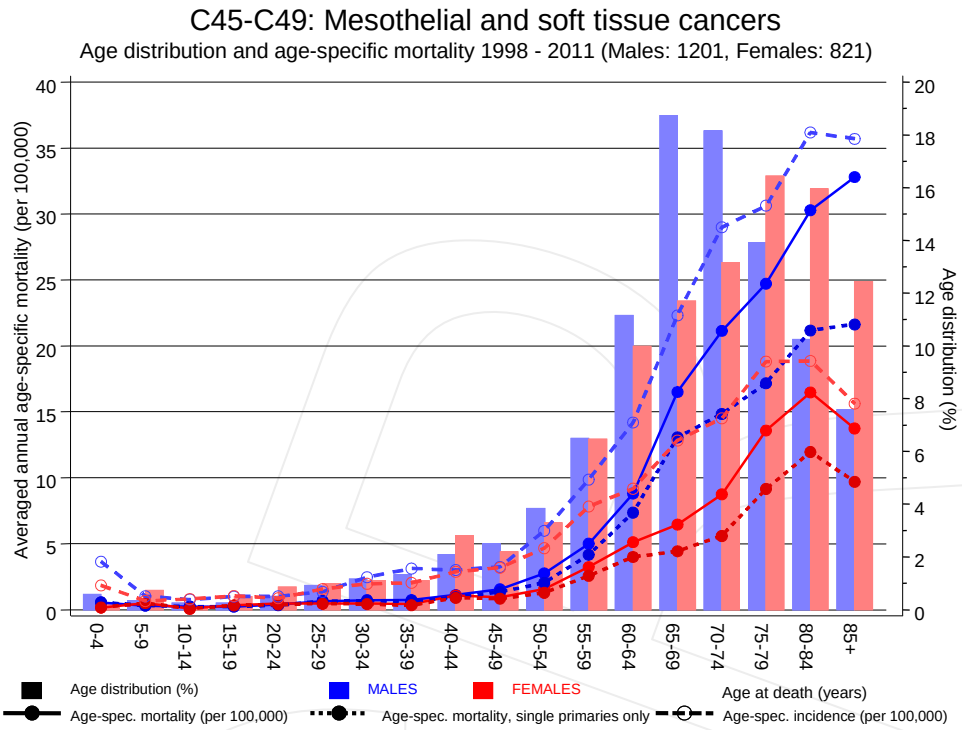
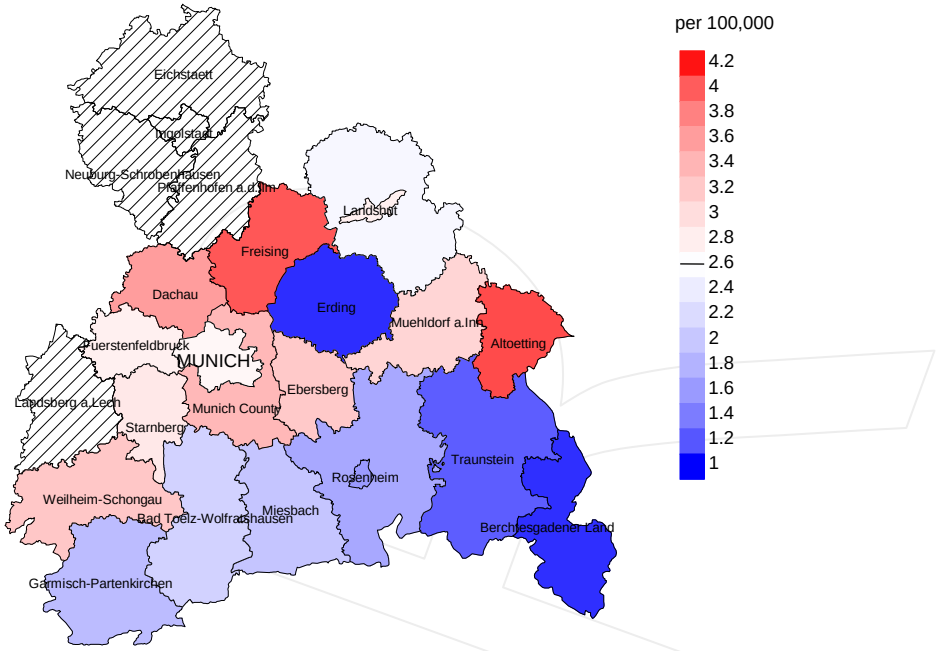


Figure 18. Distribution of age at death (bars) and age-specific mortality (all patients: solid line, patients with single primaries: dotted line). The age-specific incidence is additionally plotted for comparison (dashed line).

The difference between age at diagnosis (Table 3) and age at mesoth. and soft tissue ca.-related death (see Table 10) should be considered.

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



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

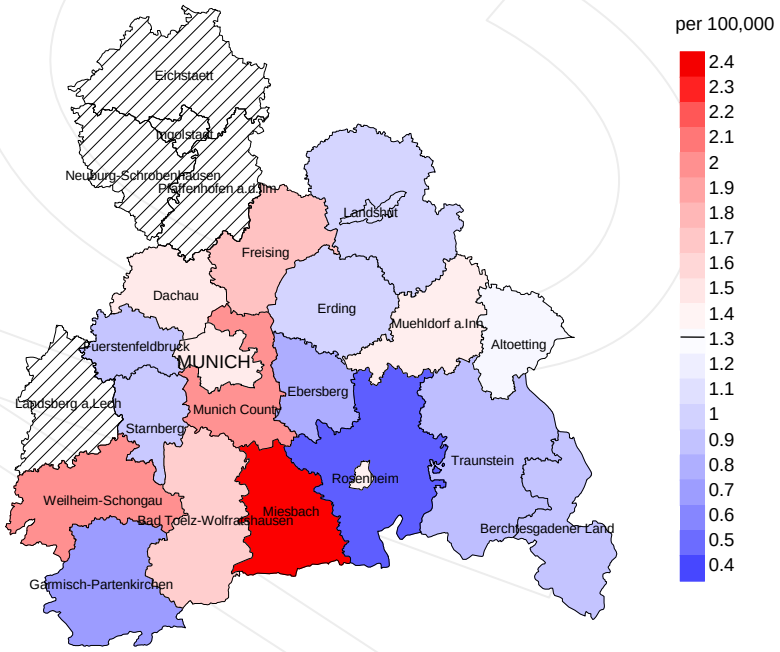
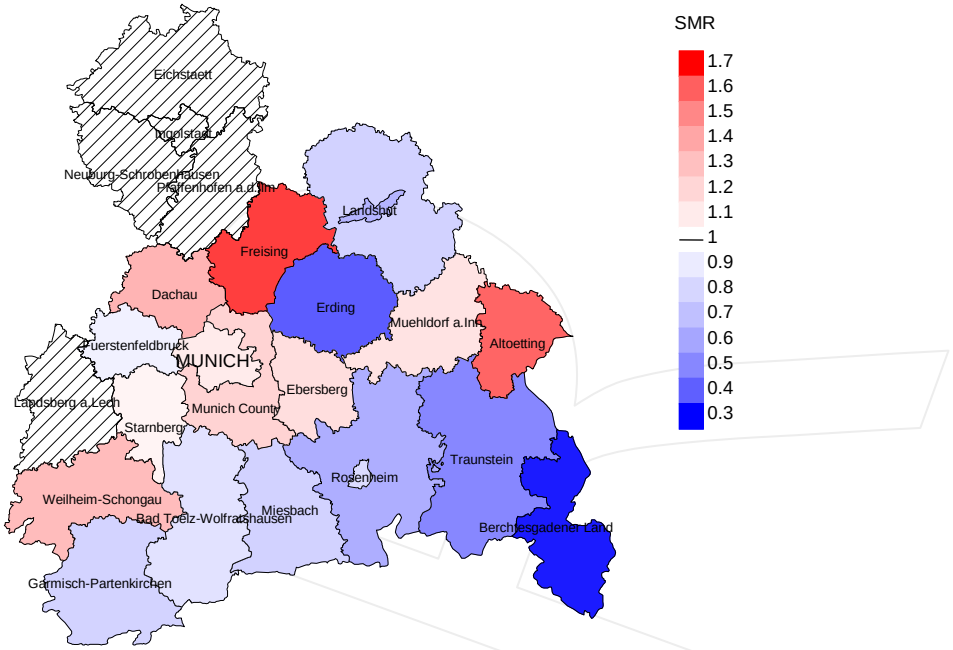


Figure 19a. Map of cancer mortality (world standard population) by county averaged for period 2003 to 2008. According to their individual mortality rates, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population mean (males 2.6/100,000 WS N=541, females 1.3/100,000 WS N=352). 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 6 women died from mesoth. and soft tissue ca.. Therefore, the mean mortality rate for this cancer type in this area can be calculated at 0.8/100,000 (world standard population). Though, the value of this parameter may vary with an underlying probability of 99% between 0.1 and 3.4/100,000.

Standardized mortality ratio (SMR) 2003 - 2008: Males



Standardized mortality ratio (SMR) 2003 - 2008: Females

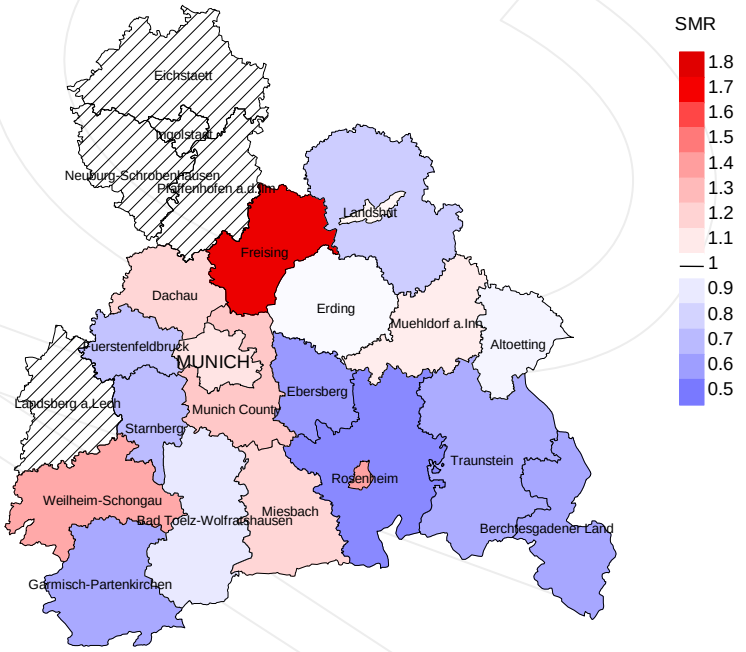


Figure 19b. Map of standardized mortality ratio (SMR, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual SMR values, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population overall of 1.0 (males N=541, females N=352). 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 6 women died from mesoth. and soft tissue ca.. Therefore, the mean standardized mortality ratio (SMR) for this cancer type in this area can be calculated at 0.59. Though, the value of this parameter may vary with an underlying probability of 99% between 0.15 and 1.53, 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

Recommended Citation

Munich Cancer Registry. Baseline statistics C45-C49: Mesoth. and soft tissue ca. [Internet]. 2013 [updated 2013 Apr 2; cited 2013 Jun 1]. Available from: http://www.tumorregister-muenchen.de/en/facts/base/base_C4549E.pdf

Copyright

Disclaimer

Index of figures and tables