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

C49: Soft tissue cancer

Year of diagnosis	1998-2011
Patients	1640
Diseases	1645
Creation date	04/02/2013
Export date	01/03/2013
Population	4.5 m

http://www.tumorregister-muenchen.de/en/facts/base/base_C49__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, 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.

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	84	7	8.3	25.0	77.4	100.0
1999	85	5	5.9	32.9	54.1	97.6
2000	88	9	10.2	27.3	55.7	97.7
2001	69	9	13.0	10.1	53.6	97.1
2002	111	9	8.1	20.7	63.1	97.3
2003	134	15	11.2	23.1	61.2	94.8
2004	117	12	10.3	19.7	53.0	99.1
2005	152	7	4.6	19.1	50.7	92.1
2006	107	9	8.4	29.9	52.3	97.2
2007	147	6	4.1	18.4	39.5	74.1 ##
2008	151	6	4.0	22.5	48.3	75.5
2009	153	7	4.6	27.5	43.1	82.4
2010	125	5	4.0	20.0	38.4	91.2
2011	122	9	7.4	30.3	30.3	72.1 ###
1998-2011	1645	115	7.0	23.3	50.2	89.1

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	84	41	43	48.8
1999	85	49	36	57.6
2000	88	42	46	47.7
2001	69	32	37	46.4
2002	111	67	44	60.4
2003	134	58	76	43.3
2004	117	67	50	57.3
2005	152	78	74	51.3
2006	107	62	45	57.9
2007	147	71	76	48.3
2008	151	79	72	52.3
2009	153	80	73	52.3
2010	125	65	60	52.0
2011	122	63	59	51.6
1998-2011	1645	854	791	51.9

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	41	43	3.7	3.7	2.7	2.2	3.5	2.7	4.3	3.1
1999	49	36	4.4	3.0	3.2	2.0	4.0	2.5	4.7	2.8
2000	42	46	3.7	3.8	2.7	2.7	3.4	3.2	4.0	3.6
2001	32	37	2.8	3.0	2.1	1.9	2.7	2.5	3.1	2.8
2002	67	44	3.6	2.2	2.8	1.4	3.3	1.7	3.7	1.9
2003	58	76	3.1	3.9	2.3	2.1	2.9	2.8	3.3	3.3
2004	67	50	3.6	2.5	2.5	1.8	3.1	2.1	3.5	2.3
2005	78	74	4.1	3.7	3.4	2.3	3.8	2.8	3.9	3.4
2006	62	45	3.2	2.2	1.9	1.6	2.7	1.8	3.3	2.0
2007	71	76	3.2	3.3	2.0	2.0	2.6	2.5	3.2	2.7
2008	79	72	3.5	3.1	2.4	1.7	3.0	2.2	3.4	2.6
2009	80	73	3.6	3.1	2.0	1.9	2.8	2.4	3.6	2.8
2010	65	60	2.9	2.6	1.9	1.2	2.5	1.7	2.8	2.2
2011	63	59	2.8	2.5	1.6	1.4	2.2	1.8	2.7	2.0
1998-2011	854	791	3.4	3.0	2.3	1.8	2.9	2.3	3.4	2.6

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	84	60.1	23.2	0.4	93.2	28.3	45.4	66.8	77.1	85.7
1999	85	59.3	18.1	3.5	97.4	37.2	49.5	62.0	72.0	78.6
2000	88	56.1	23.0	0.2	97.1	28.1	38.9	60.0	75.4	82.6
2001	69	58.8	18.4	11.8	95.4	37.6	47.1	58.8	72.9	82.3
2002	111	57.6	23.7	0.0	93.0	28.0	42.7	63.0	76.4	83.9
2003	134	61.2	21.1	5.3	92.5	26.6	52.0	65.8	78.1	84.0
2004	117	58.1	21.3	1.3	96.1	25.6	44.6	64.3	73.5	80.6
2005	152	57.2	22.1	0.2	92.0	28.4	44.6	62.2	73.2	81.9
2006	107	61.1	20.9	1.6	103	33.8	51.5	63.0	78.2	83.9
2007	147	61.7	19.9	0.2	96.4	35.5	53.6	66.4	75.2	81.7
2008	151	61.7	19.7	0.3	101	34.2	49.9	65.0	76.4	83.4
2009	153	64.6	18.6	2.2	94.3	36.2	57.1	68.2	77.9	85.0
2010	125	62.4	20.0	3.4	97.3	33.9	50.1	67.1	77.7	82.8
2011	122	62.9	18.3	11.7	95.8	38.6	50.7	67.2	76.6	84.6
1998-2011	1645	60.5	20.7	0.0	103	32.3	48.8	64.5	75.8	83.4

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	41	56.8	22.8	0.4	90.8	28.3	40.4	63.3	73.8	82.5
1999	49	59.4	19.1	3.5	97.4	33.0	52.4	61.9	72.0	78.6
2000	42	56.4	23.1	0.2	88.5	28.9	40.2	59.5	71.6	84.3
2001	32	58.2	22.3	11.8	95.4	32.2	45.0	56.4	75.1	87.1
2002	67	54.4	24.4	0.1	92.4	20.1	36.1	59.8	72.1	81.3
2003	58	55.7	23.0	8.1	89.5	19.5	38.7	58.4	70.7	86.3
2004	67	57.6	20.1	1.3	85.8	32.1	44.6	64.3	71.7	78.7
2005	78	52.4	22.5	0.2	90.9	9.2	39.3	59.1	66.9	74.1
2006	62	63.1	16.8	15.9	86.9	38.9	55.0	63.8	77.6	82.7
2007	71	62.1	20.6	0.2	96.4	35.9	53.7	68.1	75.8	80.5
2008	79	58.7	19.4	0.3	95.2	33.6	46.4	61.5	73.2	79.8
2009	80	66.8	19.7	5.2	93.0	35.5	60.4	70.6	79.8	87.1
2010	65	59.2	22.1	3.4	92.7	31.7	47.4	60.5	75.4	84.9
2011	63	61.3	16.9	16.7	84.7	37.2	49.6	66.9	74.6	79.4
1998-2011	854	58.9	21.1	0.1	97.4	31.2	45.9	63.0	73.9	82.3

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	43	63.2	23.4	3.4	93.2	33.0	50.8	72.3	77.9	86.2
1999	36	59.2	16.8	17.4	87.7	38.5	45.4	63.2	71.3	83.0
2000	46	55.7	23.2	0.4	97.1	22.7	34.9	60.8	75.8	80.7
2001	37	59.4	14.6	26.1	85.9	39.8	48.6	61.1	70.1	81.0
2002	44	62.5	21.9	0.0	93.0	33.1	49.3	67.8	79.1	85.7
2003	76	65.5	18.6	5.3	92.5	38.2	56.9	67.7	78.9	84.0
2004	50	58.8	22.9	2.4	96.1	21.4	42.6	64.2	74.6	83.9
2005	74	62.2	20.5	2.8	92.0	28.7	52.5	67.6	78.8	82.6
2006	45	58.4	25.4	1.6	103	17.1	40.8	61.7	79.1	86.5
2007	76	61.3	19.3	0.3	88.2	35.5	52.8	66.1	74.0	82.7
2008	72	65.1	19.6	6.1	101	35.6	52.6	67.3	80.0	86.7
2009	73	62.2	17.2	2.2	94.3	39.8	55.8	63.8	74.6	80.3
2010	60	65.8	16.9	25.1	97.3	42.0	54.7	69.9	78.3	82.0
2011	59	64.6	19.7	11.7	95.8	39.4	51.2	67.6	81.5	88.0
1998-2011	791	62.1	20.1	0.0	103	33.9	51.6	65.8	77.4	84.2

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	38	2.3	2.3	26	3.0	3.0	12	1.5	1.5
5-9	15	0.9	3.2	9	1.1	4.1	6	0.8	2.3
10-14	14	0.9	4.1	7	0.8	4.9	7	0.9	3.2
15-19	20	1.2	5.3	11	1.3	6.2	9	1.1	4.3
20-24	19	1.2	6.4	10	1.2	7.4	9	1.1	5.4
25-29	37	2.2	8.7	17	2.0	9.4	20	2.5	8.0
30-34	64	3.9	12.6	36	4.2	13.6	28	3.5	11.5
35-39	71	4.3	16.9	48	5.6	19.2	23	2.9	14.4
40-44	84	5.1	22.0	46	5.4	24.6	38	4.8	19.2
45-49	69	4.2	26.2	33	3.9	28.5	36	4.6	23.8
50-54	107	6.5	32.7	56	6.6	35.0	51	6.4	30.2
55-59	145	8.8	41.5	75	8.8	43.8	70	8.8	39.1
60-64	158	9.6	51.1	81	9.5	53.3	77	9.7	48.8
65-69	188	11.4	62.6	102	11.9	65.2	86	10.9	59.7
70-74	181	11.0	73.6	102	11.9	77.2	79	10.0	69.7
75-79	173	10.5	84.1	77	9.0	86.2	96	12.1	81.8
80-84	129	7.8	91.9	58	6.8	93.0	71	9.0	90.8
85+	133	8.1	100.0	60	7.0	100.0	73	9.2	100.0
All ages	1645	100.0		854	100.0		791	100.0	

Included in the statistics are 28.6% multiple primaries in males and 30.5% 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=53 %	Females DCO rate n=62 %	Males Prop.all cancers n=132509 %	Females Prop.all cancers n=129521 %
0- 4	26	12	2.1	1.0	7.7		9.2	5.8
5- 9	9	6	0.7	0.5			5.8	5.8
10-14	7	7	0.5	0.6			5.3	4.6
15-19	11	9	0.8	0.7	9.1	11.1	3.8	3.8
20-24	10	9	0.7	0.6	10.0		2.0	2.1
25-29	17	20	1.0	1.2			2.1	2.2
30-34	36	28	1.8	1.5		3.6	2.8	1.6
35-39	48	23	2.2	1.1	6.3	4.3	2.4	0.7
40-44	46	38	2.1	1.8		2.6	1.7	0.7
45-49	33	36	1.7	1.9	9.1	2.8	0.7	0.5
50-54	56	51	3.4	3.0	7.1	2.0	0.8	0.6
55-59	75	70	4.8	4.3	5.3	5.7	0.6	0.6
60-64	81	77	5.3	4.8	2.5	1.3	0.4	0.5
65-69	102	86	7.5	5.8	2.9	2.3	0.4	0.5
70-74	102	79	9.9	6.4	8.8	7.6	0.5	0.5
75-79	77	95	11.4	9.6	6.5	12.6	0.5	0.6
80-84	58	71	14.3	8.9	20.7	16.9	0.5	0.5
85+	60	73	21.6	9.8	6.7	26.0	0.7	0.5
All ages	854	790			6.2	7.8	0.6	0.6
Incidence								
Raw			3.4	3.0				
WS			2.3	1.8				
ES			2.9	2.3				
BRD-S			3.4	2.6				

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 1998-2011
MALES

Diagnosis	Observed n	Expected n	SIR	LCL 95%	UCL 95%		EAR	DCO %
C09-C10 Oropharynx	2	0.3	7.0	0.8	25.1		7.9	
C15 Oesophagus	2	0.5	4.3	0.5	15.6		7.1	
C16 Stomach	4	1.2	3.2	0.9	8.3		12.8	
C17 Small intestine	2	0.1	16.8	2.0	60.6	#	8.7	
C18 Colon	5	2.8	1.8	0.6	4.1		10.1	
C33-C34 Lung	6	3.2	1.9	0.7	4.1		12.9	16.7
C43 Malign. melanoma	3	1.0	2.9	0.6	8.4		9.1	
C46,C49 Soft tissue	3	0.2	18.7	3.9	54.6	#	13.2	
C61 Prostate	15	8.0	1.9	1.0	3.1	#	32.3	
C64 Kidney	3	0.9	3.2	0.7	9.3		9.6	
C67 Bladder	4	1.2	3.2	0.9	8.3		12.8	
C82-C85 NHL	4	1.1	3.7	1.0	9.4	#	13.5	
C91-C96 Leukaemia	3	0.5	6.6	1.4	19.3	#	11.8	
Other primaries	9	4.0	2.2	1.0	4.3	#	23.1	11.1
Not observed	0	2.8	0.0	0.0	1.3		-12.9	
All mult. primaries	65	27.9	2.3	1.8	3.0	#	172.0	3.1

Patients	619
Mean age at second malignancy (years)	68.7
Person-years	2157
Mean observation time (years)	3.5
Median observation time (years)	2.4

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	1.9	1.5	0.3	4.5		5.2	
C19-C20	Rectum	6	0.8	7.1	2.6	15.4	#	25.2	
C33-C34	Lung	3	1.3	2.3	0.5	6.8		8.4	
C43	Malign. melanoma	3	0.7	4.5	0.9	13.1		11.4	
C46,C49	Soft tissue	2	0.1	18.0	2.2	64.9	#	9.2	
C50	Breast	13	5.8	2.2	1.2	3.8	#	35.3	
C54	Corpus uteri	2	1.0	1.9	0.2	7.0		4.8	
C64	Kidney	3	0.5	6.4	1.3	18.8	#	12.4	
C70-C72	CNS cancer	2	0.3	7.1	0.9	25.7		8.4	
C73	Thyroid	2	0.4	5.2	0.6	18.8		7.9	
C82-C85	NHL	2	0.7	2.8	0.3	10.2		6.3	
C91-C96	Leukaemia	2	0.3	6.8	0.8	24.6		8.3	
Other primaries		6	2.0	3.1	1.1	6.7	#	19.8	16.7
Not observed		0	3.3	0.0	0.0	1.1		-16.3	
All mult. primaries		49	19.1	2.6	1.9	3.4	#	146.3	2.0

Patients	572
Mean age at second malignancy (years)	70.1
Person-years	2044
Mean observation time (years)	3.6
Median observation time (years)	2.5

The occurrence of second malignancy is statistically significant.

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

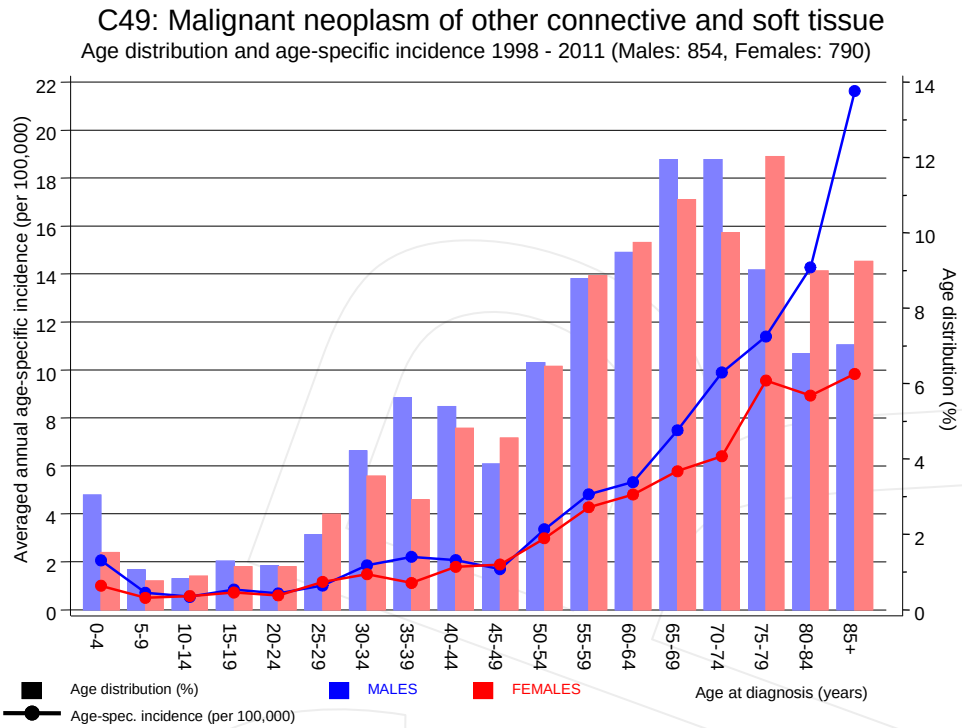


Figure 7. Age distribution and age-specific incidence

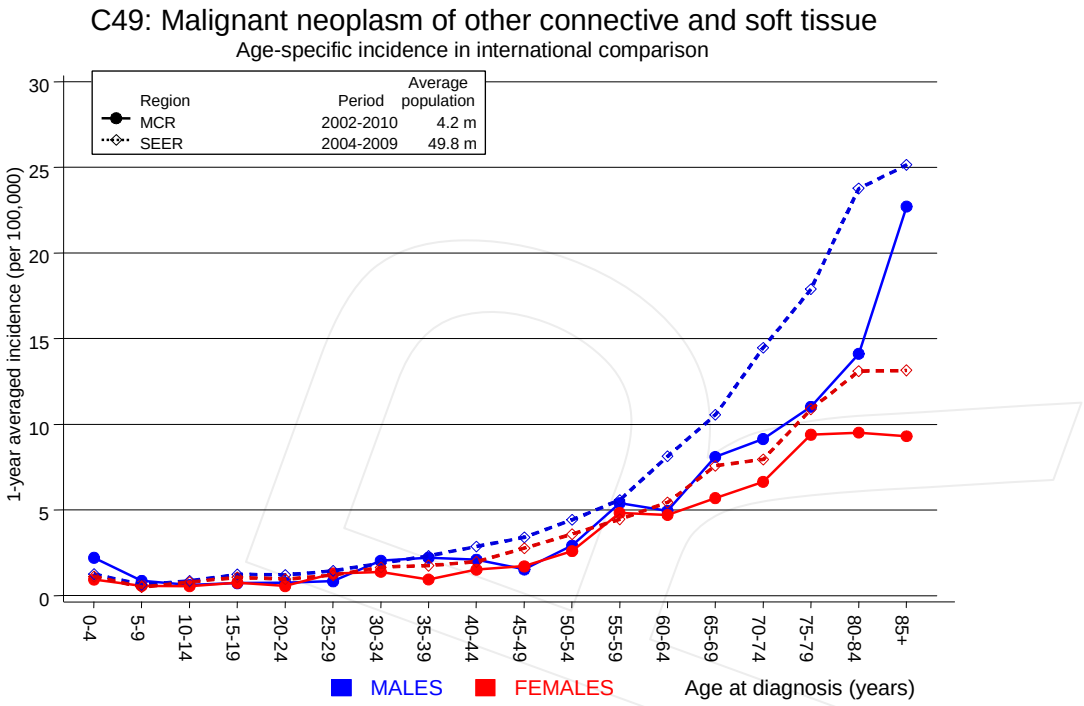


Figure 7a. Age-specific incidence in MCR registry areas compared to SEER (Surveillance, Epidemiology, and End Results, USA).

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.

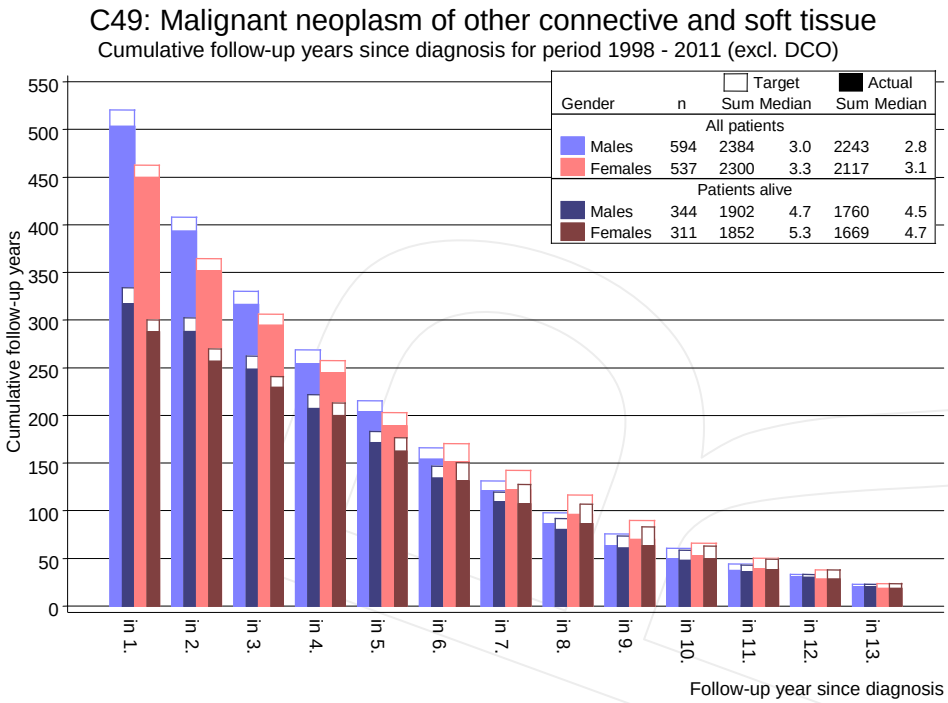
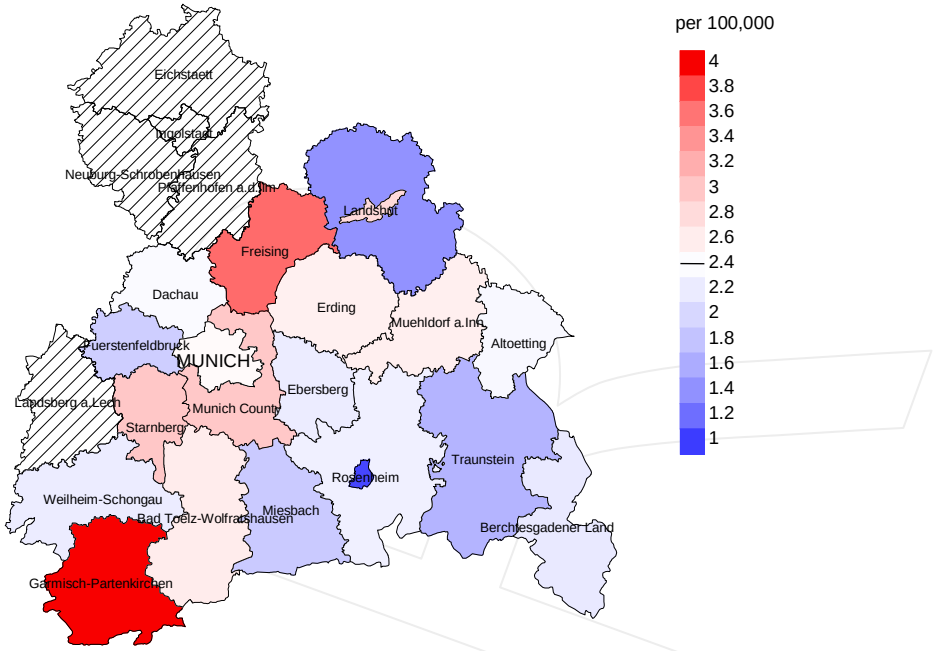


Figure 8. Cumulative follow-up years depending on time since diagnosis

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

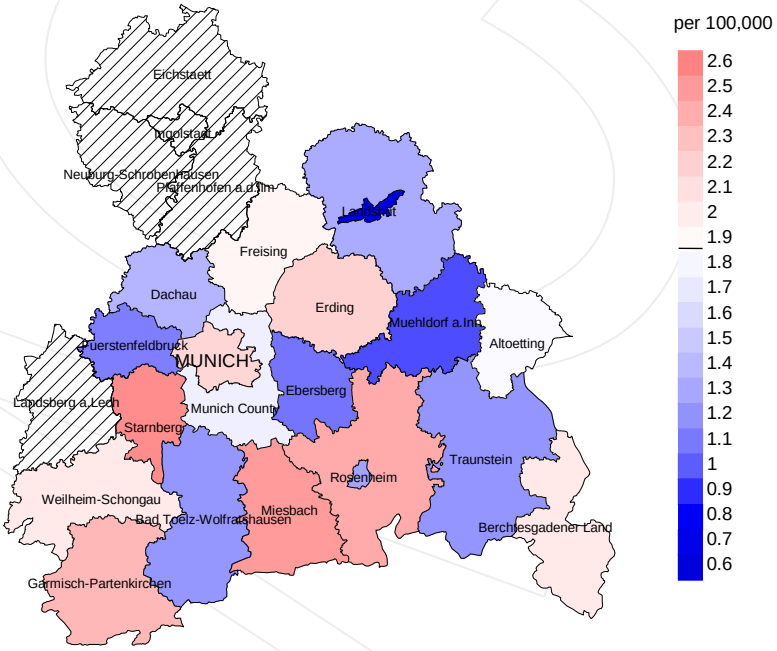
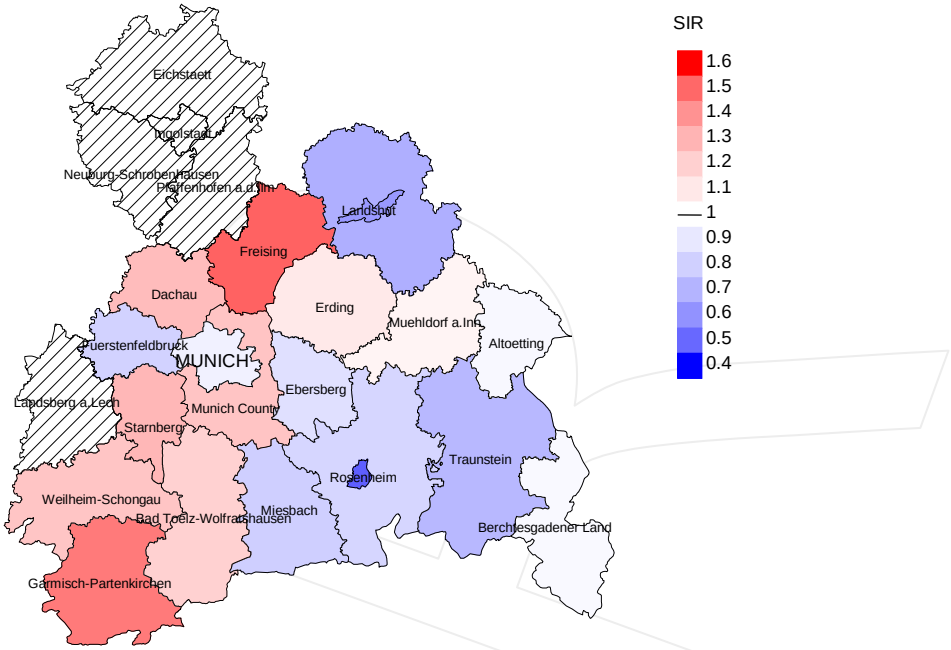


Figure 9a. Map of cancer incidence (world standard population, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual incidence rates, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population mean (males 2.4/100,000 WS N=398, females 1.9/100,000 WS N=371). 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 5 women were identified with newly diagnosed soft tissue cancer. Therefore, the mean incidence rate for this cancer type in this area can be calculated at 1.1/100,000 (world standard population). Though, the value of this parameter may vary with an underlying probability of 99% between 0.2 and 4.0/100,000.

Standardized incidence ratio (SIR) 2003 - 2008: Males



Standardized incidence ratio (SIR) 2003 - 2008: Females

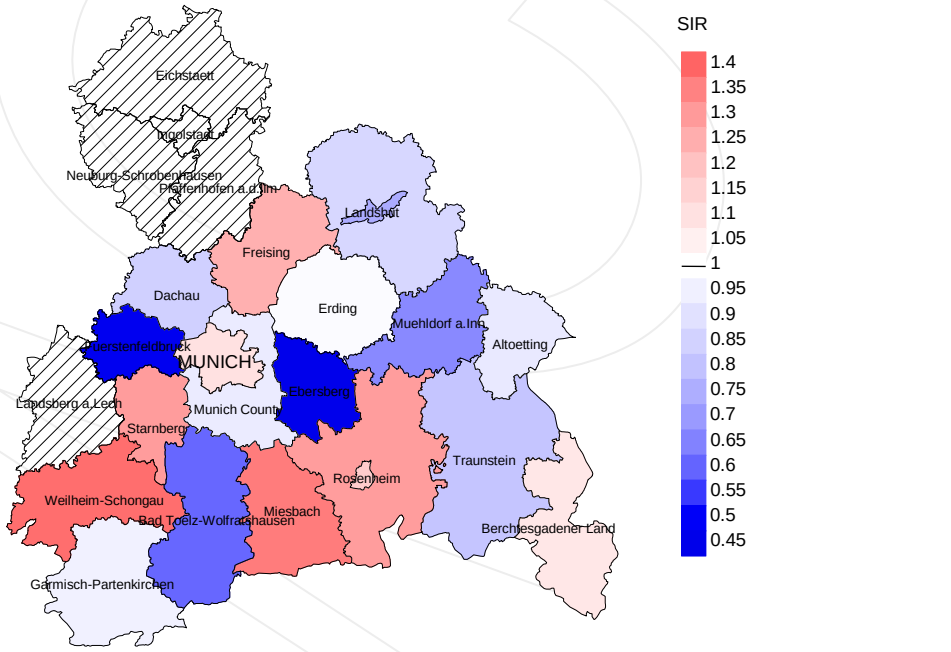


Figure 9b. Map of standardized incidence ratio (SIR, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual SIR values, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population overall of 1.0 (males N=398, females N=371). 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 5 women were identified with newly diagnosed soft tissue cancer. Therefore, the mean standardized incidence ratio (SIR) for this cancer type in this area can be calculated at 0.45. Though, the value of this parameter may vary with an underlying probability of 99% between 0.10 and 1.28, 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	84	100.0	8.3	65	77.4	95.4
1999	85	97.6	5.9	46	54.1	95.7
2000	88	97.7	10.2	49	55.7	100.0
2001	69	97.1	13.0	37	53.6	97.3
2002	111	97.3	8.1	70	63.1	94.3
2003	134	94.8	11.2	82	61.2	96.3
2004	117	99.1	10.3	62	53.0	100.0
2005	152	92.1	4.6	77	50.7	97.4
2006	107	97.2	8.4	56	52.3	100.0
2007	147	74.1	4.1	58	39.5	98.3
2008	151	75.5	4.0	73	48.3	97.3
2009	153	82.4	4.6	66	43.1	98.5
2010	125	91.2	4.0	48	38.4	100.0
2011	122	72.1	7.4	37	30.3	100.0
1998-2011	1645	89.1	7.0	826	50.2	97.7

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	84	57	94.7	13	15.5
1999	85	50	94.0	11	12.9
2000	88	46	93.5	15	17.0
2001	69	39	97.4	11	15.9
2002	111	68	95.6	21	18.9
2003	134	72	95.8	31	23.1
2004	117	79	97.5	25	21.4
2005	152	82	98.8	21	13.8
2006	107	82	95.1	21	19.6
2007	147	88	98.9	21	14.3
2008	151	74	97.3	22	14.6
2009	153	106	98.1	30	19.6
2010	125	97	100.0	22	17.6
2011	122	83	100.0	25	20.5
1998-2011	1645	1023	97.3	289	17.6

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	57	71.9	28.1	90.7
1999	50	80.0	20.0	91.5
2000	46	78.3	21.7	90.7
2001	39	92.3	7.7	94.7
2002	68	76.5	23.5	86.2
2003	72	86.1	13.9	88.4
2004	79	79.7	20.3	87.0
2005	82	82.9	17.1	88.9
2006	82	78.0	22.0	82.1
2007	88	83.0	17.0	89.7
2008	74	79.7	20.3	81.9
2009	106	80.2	19.8	83.7
2010	97	82.5	17.5	84.5
2011	83	80.7	19.3	83.1
1998-2011	1023	80.7	19.3	86.6

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	30	68.1	63.6	78.6	66.9
1999	30	58.9	56.1	69.8	57.7
2000	24	62.1	59.5	72.0	60.7
2001	21	57.5	53.1	84.2	57.0
2002	36	68.6	64.9	77.0	66.6
2003	30	66.9	62.8	87.3	61.3
2004	43	65.6	62.5	79.3	65.5
2005	47	63.7	61.7	72.5	62.2
2006	40	66.8	64.5	74.5	65.5
2007	53	67.9	65.4	82.1	65.6
2008	35	74.5	71.2	87.9	70.2
2009	59	72.7	69.5	83.0	69.7
2010	52	73.0	70.9	80.0	70.9
2011	41	71.8	70.0	84.8	69.5
1998-2011	541	67.9	64.9	79.3	65.7

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	27	66.8	61.3	82.4	66.1
1999	20	65.1	64.3	68.3	65.5
2000	22	68.6	69.3	66.3	67.3
2001	18	60.4	60.4		60.4
2002	32	66.1	63.3	81.2	66.2
2003	42	70.7	69.1	82.7	70.1
2004	36	70.8	66.4	86.2	66.9
2005	35	71.7	70.5	78.8	70.4
2006	42	73.5	70.5	84.6	72.0
2007	35	70.7	67.5	83.5	68.9
2008	39	75.9	72.3	90.0	72.4
2009	47	73.3	72.2	79.7	72.4
2010	45	68.1	65.8	85.9	66.4
2011	42	78.3	75.8	85.5	76.6
1998-2011	482	70.9	68.4	82.3	69.3

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	21	1.9	0.51	1.3	0.47	1.7	0.50	2.2	0.52
1999	24	2.1	0.49	1.6	0.51	2.0	0.51	2.3	0.49
2000	19	1.7	0.45	1.2	0.44	1.5	0.46	1.8	0.45
2001	18	1.6	0.56	1.2	0.56	1.4	0.53	1.5	0.49
2002	25	1.3	0.37	0.8	0.29	1.2	0.35	1.5	0.39
2003	25	1.3	0.43	0.9	0.40	1.2	0.42	1.5	0.45
2004	35	1.9	0.52	1.2	0.47	1.6	0.50	2.1	0.60
2005	38	2.0	0.49	1.3	0.39	1.7	0.44	2.0	0.51
2006	31	1.6	0.50	1.1	0.55	1.4	0.52	1.6	0.49
2007	45	2.0	0.63	1.2	0.60	1.7	0.65	2.0	0.64
2008	28	1.3	0.35	0.6	0.27	1.0	0.32	1.3	0.39
2009	45	2.0	0.56	1.0	0.49	1.5	0.53	2.0	0.56
2010	40	1.8	0.62	0.8	0.43	1.3	0.51	1.7	0.59
2011	36	1.6	0.57	0.8	0.49	1.2	0.54	1.6	0.61
1998-2011	430	1.7	0.50	1.0	0.45	1.4	0.48	1.8	0.52

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	20	1.7	0.47	1.1	0.49	1.3	0.49	1.5	0.48
1999	16	1.3	0.44	0.8	0.41	1.0	0.40	1.2	0.43
2000	17	1.4	0.37	0.6	0.21	0.9	0.27	1.2	0.33
2001	18	1.5	0.49	1.0	0.51	1.1	0.46	1.3	0.48
2002	27	1.4	0.61	0.9	0.64	1.1	0.63	1.2	0.62
2003	37	1.9	0.49	0.9	0.46	1.2	0.44	1.5	0.44
2004	28	1.4	0.56	0.7	0.39	1.0	0.47	1.2	0.53
2005	30	1.5	0.41	0.7	0.29	0.9	0.34	1.2	0.35
2006	33	1.6	0.73	0.7	0.45	1.0	0.57	1.3	0.67
2007	28	1.2	0.37	0.6	0.29	0.8	0.33	1.0	0.37
2008	31	1.3	0.44	0.6	0.34	0.8	0.36	1.0	0.38
2009	40	1.7	0.55	0.7	0.40	1.1	0.43	1.4	0.48
2010	40	1.7	0.67	0.9	0.74	1.2	0.71	1.5	0.70
2011	31	1.3	0.53	0.4	0.32	0.7	0.38	0.9	0.46
1998-2011	396	1.5	0.50	0.7	0.41	1.0	0.44	1.2	0.47

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	8	1.0	1.0	6	1.4	1.4	2	0.5	0.5
5-9	9	1.1	2.0	3	0.7	2.1	6	1.5	2.0
10-14	4	0.5	2.5	3	0.7	2.8	1	0.3	2.3
15-19	5	0.6	3.1	3	0.7	3.5	2	0.5	2.8
20-24	8	1.0	4.1	4	0.9	4.4	4	1.0	3.8
25-29	15	1.8	5.9	10	2.3	6.7	5	1.3	5.0
30-34	16	1.9	7.8	10	2.3	9.0	6	1.5	6.5
35-39	15	1.8	9.6	12	2.8	11.8	3	0.8	7.3
40-44	32	3.9	13.5	18	4.2	15.9	14	3.5	10.8
45-49	25	3.0	16.5	14	3.2	19.2	11	2.8	13.6
50-54	34	4.1	20.6	19	4.4	23.6	15	3.8	17.4
55-59	58	7.0	27.6	30	6.9	30.5	28	7.1	24.4
60-64	80	9.6	37.2	41	9.5	40.0	39	9.8	34.3
65-69	95	11.4	48.7	51	11.8	51.7	44	11.1	45.3
70-74	108	13.0	61.7	67	15.5	67.2	41	10.3	55.7
75-79	108	13.0	74.7	47	10.9	78.1	61	15.4	71.0
80-84	96	11.6	86.3	44	10.2	88.2	52	13.1	84.1
85+	114	13.7	100.0	51	11.8	100.0	63	15.9	100.0
All ages	830	100.0		433	100.0		397	100.0	

Included in the statistics are 28.6% multiple primaries in males and 30.5% 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	6	2	0.5	0.23	0.2	0.17	20.7	9.1
5- 9	3	6	0.2	0.33	0.5	1.00	9.7	16.7
10-14	3	1	0.2	0.43	0.1	0.14	10.3	4.2
15-19	3	2	0.2	0.27	0.2	0.22	7.9	6.9
20-24	4	4	0.3	0.40	0.3	0.44	5.0	9.3
25-29	10	5	0.6	0.59	0.3	0.25	11.5	4.9
30-34	10	6	0.5	0.28	0.3	0.21	6.0	3.0
35-39	12	3	0.5	0.25	0.1	0.13	3.3	0.7
40-44	18	14	0.8	0.39	0.7	0.37	2.4	1.4
45-49	14	11	0.7	0.42	0.6	0.31	0.9	0.6
50-54	19	15	1.1	0.34	0.9	0.29	0.7	0.6
55-59	30	28	1.9	0.40	1.7	0.40	0.6	0.7
60-64	41	39	2.7	0.51	2.4	0.51	0.5	0.7
65-69	51	44	3.7	0.50	3.0	0.51	0.5	0.6
70-74	67	41	6.5	0.66	3.3	0.52	0.6	0.5
75-79	47	61	7.0	0.61	6.1	0.64	0.4	0.7
80-84	44	52	10.8	0.76	6.5	0.73	0.5	0.5
85+	51	63	18.4	0.85	8.5	0.86	0.7	0.6
All ages	433	397					0.6	0.7
Mortality								
Raw			1.7	0.51	1.5	0.50		
WS			1.0	0.45	0.7	0.41		
ES			1.4	0.49	1.0	0.44		
BRD-S			1.8	0.52	1.2	0.47		
PYLL-70								
per 100,000			18.7		13.5			
ES			18.8		13.6			
AYLL-70			19.0		16.9			

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 ←%
C00	Lip	1	0.6					1	100.0
C03-C06	Oral cavity	1	0.6					1	100.0
C07-C08	Salivary gland	1	0.6	1	100.0				
C09-C10	Oropharynx	4	2.5	1	25.0	1	25.0	2	50.0
C12-C13	Hypopharynx	2	1.2	1	50.0			1	50.0
C15	Oesophagus	5	3.1	1	20.0			4	80.0
C16	Stomach	2	1.2			1	50.0	1	50.0
C17	Small intestine	1	0.6	1	100.0				
C18	Colon	11	6.8	8	72.7	1	9.1	2	18.2
C19-C20	Rectum	7	4.3	5	71.4			2	28.6
C22	Liver	1	0.6			1	100.0		
C23-C24	Bile	1	0.6					1	100.0
C25	Pancreas	2	1.2	1	50.0	1	50.0		
C30-C31	Sinuses	2	1.2	1	50.0			1	50.0
C32	Larynx	1	0.6					1	100.0
C33-C34	Lung	14	8.7	4	28.6	3	21.4	7	50.0
C40-C41	Bone	3	1.9	1	33.3			2	66.7
C43	Malign. melanoma	10	6.2	6	60.0	1	10.0	3	30.0
C44	Skin others	15	9.3	6	40.0			9	60.0
C46,C49	Soft tissue	3	1.9			1	33.3	2	66.7
C61	Prostate	22	13.7	13	59.1	1	4.5	8	36.4
C62	Testis	5	3.1	3	60.0			2	40.0
C64	Kidney	8	5.0	4	50.0	1	12.5	3	37.5
C66	Ureter	1	0.6					1	100.0
C67	Bladder	9	5.6	4	44.4	1	11.1	4	44.4
C70-C72	CNS cancer	4	2.5	2	50.0			2	50.0
C73	Thyroid	2	1.2	2	100.0				
C76-C79	CUP	2	1.2			1	50.0	1	50.0
C81	Hodgkin lymphoma	1	0.6	1	100.0				
C82-C85	NHL	10	6.2	4	40.0			6	60.0
C90	Mult. myeloma	4	2.5	2	50.0	1	25.0	1	25.0
C91-C96	Leukaemia	6	3.7	3	50.0			3	50.0
All mult. primaries		161	100.0	75	46.6	15	9.3	71	44.1

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 1998-2011
FEMALES

Diagnosis		Total n	Total %↓	Pre n	Pre ←%	Syn-chron ±30d n	Syn-chron ±30d ←%	Post n	Post ←%
C16	Stomach	1	0.7	1	100.0				
C17	Small intestine	1	0.7			1	100.0		
C18	Colon	7	4.8	3	42.9			4	57.1
C19-C20	Rectum	4	2.7	1	25.0	1	25.0	2	50.0
C23-C24	Bile	1	0.7					1	100.0
C25	Pancreas	2	1.4					2	100.0
C33-C34	Lung	6	4.1	1	16.7	1	16.7	4	66.7
C40-C41	Bone	2	1.4	1	50.0			1	50.0
C43	Malign. melanoma	7	4.8	6	85.7	1	14.3		
C44	Skin others	6	4.1	2	33.3	1	16.7	3	50.0
C46,C49	Soft tissue	1	0.7					1	100.0
C48	Peritoneal	1	0.7					1	100.0
C50	Breast	59	40.4	45	76.3			14	23.7
C51	Vulva	1	0.7					1	100.0
C53	Cervix uteri	6	4.1	6	100.0				
C54	Corpus uteri	6	4.1	4	66.7			2	33.3
C55,C57	Fem. genitals un	1	0.7	1	100.0				
C56	Ovary	4	2.7	2	50.0	1	25.0	1	25.0
C64	Kidney	4	2.7	1	25.0			3	75.0
C65	Renal pelvis	1	0.7	1	100.0				
C67	Bladder	3	2.1	2	66.7			1	33.3
C69	Eye melanoma	1	0.7					1	100.0
C70-C72	CNS cancer	8	5.5	4	50.0	1	12.5	3	37.5
C73	Thyroid	1	0.7	1	100.0				
C74-C80	Cancer others	1	0.7			1	100.0		
C76-C79	CUP	1	0.7	1	100.0				
C82-C85	NHL	6	4.1	4	66.7	2	33.3		
C90	Mult. myeloma	1	0.7	1	100.0				
C91-C96	Leukaemia	3	2.1	1	33.3			2	66.7
All mult. primaries		146	100.0	89	61.0	10	6.8	47	32.2

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 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	6	2	0.5	0.23	0.2	0.17	25.0	9.1
5- 9	3	6	0.2	0.33	0.5	1.00	10.3	18.2
10-14	3	1	0.2	0.50	0.1	0.17	10.3	4.3
15-19	3	2	0.2	0.27	0.2	0.22	8.6	7.4
20-24	3	4	0.2	0.33	0.3	0.44	4.0	10.3
25-29	10	5	0.6	0.59	0.3	0.25	12.3	5.2
30-34	10	6	0.5	0.28	0.3	0.22	6.1	3.4
35-39	12	3	0.5	0.27	0.1	0.14	3.5	0.7
40-44	17	12	0.8	0.40	0.6	0.35	2.4	1.4
45-49	14	9	0.7	0.47	0.5	0.30	1.0	0.6
50-54	15	14	0.9	0.32	0.8	0.33	0.6	0.6
55-59	24	21	1.5	0.38	1.3	0.39	0.5	0.6
60-64	34	34	2.2	0.47	2.1	0.53	0.5	0.7
65-69	41	35	3.0	0.49	2.4	0.54	0.5	0.6
70-74	50	32	4.8	0.61	2.6	0.52	0.6	0.5
75-79	35	46	5.2	0.69	4.6	0.70	0.4	0.6
80-84	36	43	8.9	0.84	5.4	0.75	0.5	0.6
85+	38	47	13.7	0.79	6.3	0.81	0.7	0.5
All ages	354	322					0.7	0.6
Mortality								
Raw			1.4	0.49	1.2	0.50		
WS			0.9	0.43	0.6	0.41		
ES			1.2	0.47	0.8	0.44		
BRD-S			1.5	0.51	1.0	0.47		
PYLL-70								
per 100,000			17.4		12.3			
ES			17.6		12.6			
AYLL-70			20.3		18.1			

* 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	6	2	0.5	0.23	0.2	0.17	26.1	9.1
5- 9	3	6	0.2	0.33	0.5	1.00	10.7	18.8
10-14	3	1	0.2	0.50	0.1	0.17	10.3	4.5
15-19	3	2	0.2	0.27	0.2	0.22	8.6	8.7
20-24	3	3	0.2	0.33	0.2	0.33	4.3	8.3
25-29	10	5	0.6	0.59	0.3	0.25	13.3	5.6
30-34	10	6	0.5	0.28	0.3	0.23	6.3	3.7
35-39	11	3	0.5	0.24	0.1	0.15	3.4	0.8
40-44	16	11	0.7	0.40	0.5	0.33	2.4	1.4
45-49	13	9	0.7	0.46	0.5	0.31	1.0	0.7
50-54	13	13	0.8	0.30	0.8	0.33	0.6	0.7
55-59	19	19	1.2	0.33	1.2	0.37	0.5	0.6
60-64	33	32	2.2	0.52	2.0	0.54	0.6	0.8
65-69	36	32	2.6	0.49	2.1	0.53	0.5	0.7
70-74	40	26	3.9	0.57	2.1	0.47	0.5	0.5
75-79	29	42	4.3	0.66	4.2	0.72	0.4	0.7
80-84	28	38	6.9	0.74	4.8	0.70	0.5	0.6
85+	31	42	11.2	0.72	5.7	0.76	0.7	0.5
All ages	307	292					0.7	0.7
Mortality								
Raw			1.2	0.47	1.1	0.49		
WS			0.8	0.41	0.6	0.40		
ES			1.0	0.44	0.8	0.43		
BRD-S			1.3	0.48	0.9	0.46		
PYLL-70								
per 100,000			16.5		11.7			
ES			16.8		12.0			
AYLL-70			21.0		18.3			

* See corresponding tables with multiple primaries.

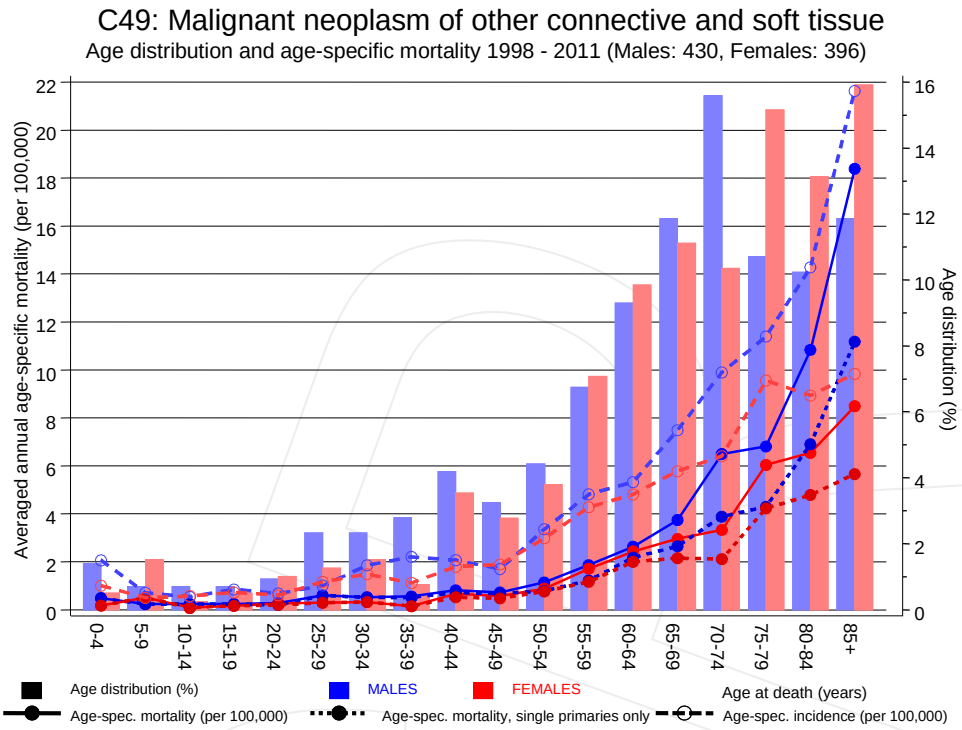
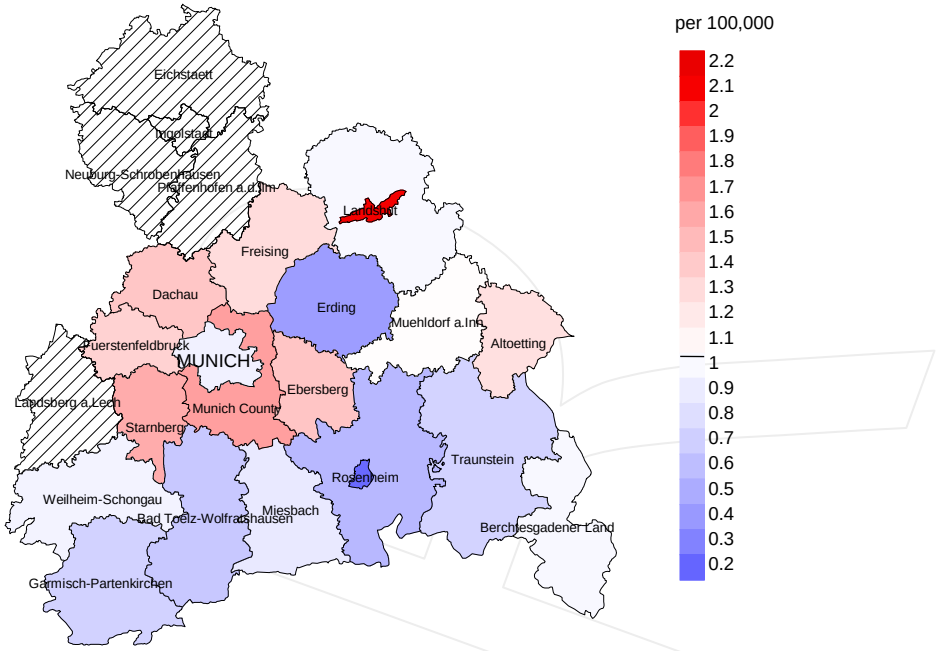


Figure 18. Distribution of age at death (bars) and age-specific mortality (all patients: solid line, patients with single primaries: dotted line). The age-specific incidence is additionally plotted for comparison (dashed line).

The difference between age at diagnosis (Table 3) and age at soft tissue 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

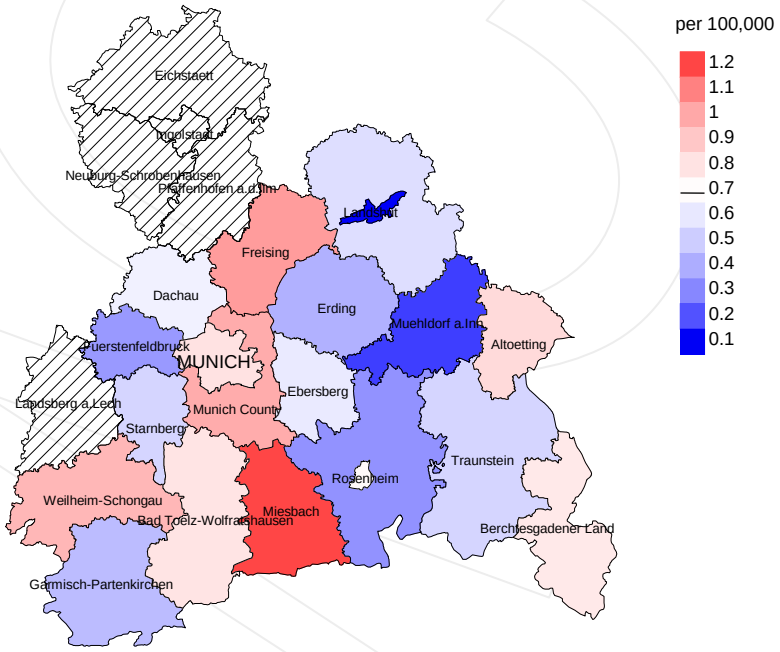
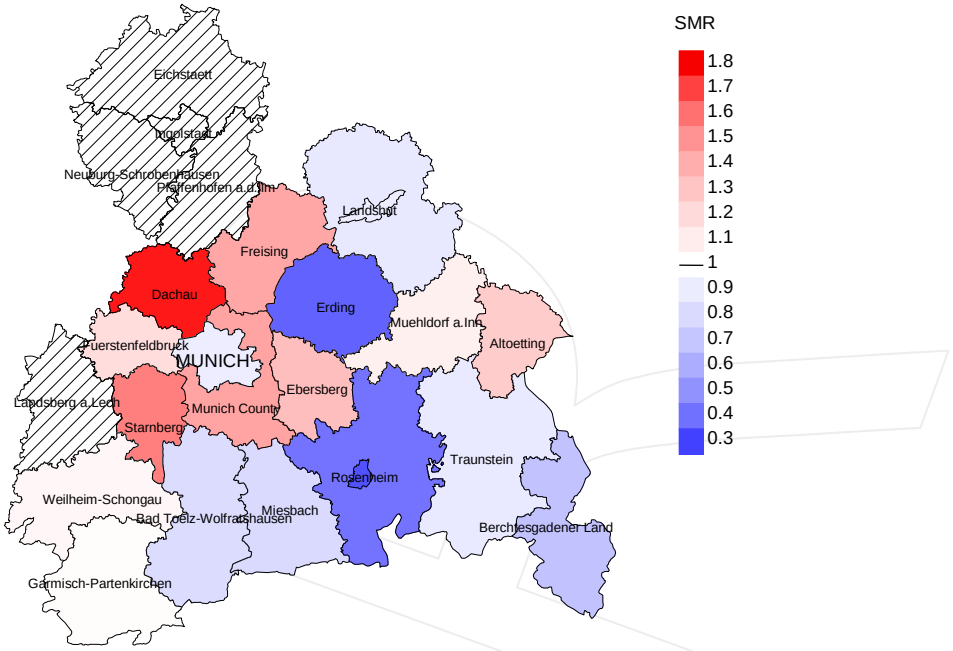


Figure 19a. Map of cancer mortality (world standard population) by county averaged for period 2003 to 2008. According to their individual mortality rates, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population mean (males 1.0/100,000 WS N=193, females 0.7/100,000 WS N=180). 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 soft tissue 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 0.0 and 3.2/100,000.

Standardized mortality ratio (SMR) 2003 - 2008: Males



Standardized mortality ratio (SMR) 2003 - 2008: Females

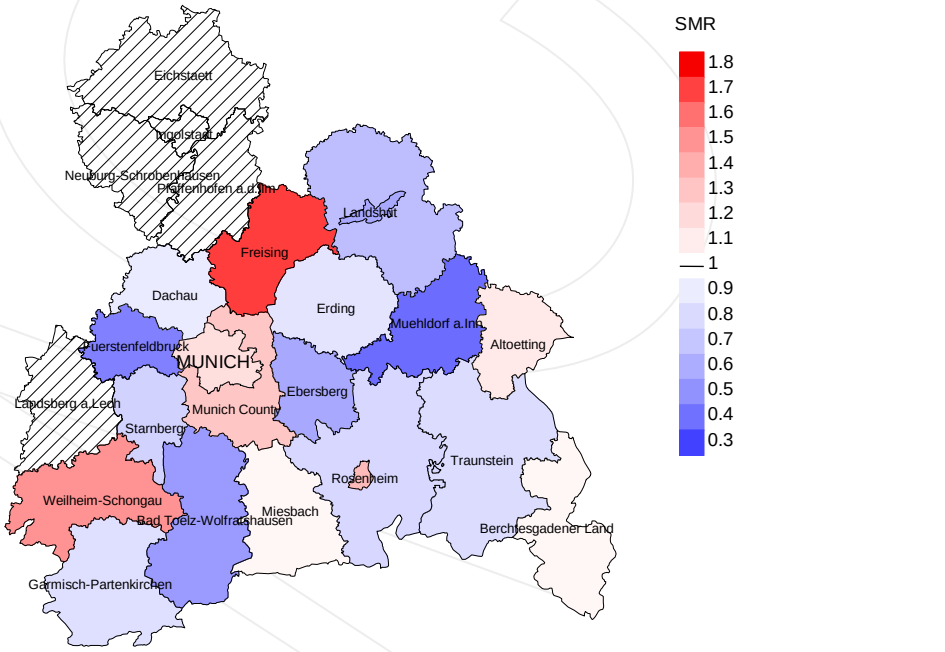


Figure 19b. Map of standardized mortality ratio (SMR, incl. DCO cases) by county averaged for period 2003 to 2008. According to their individual SMR values, the counties are displayed in different red and blue color temperatures where the fine white color indicates the population overall of 1.0 (males N=193, females N=180). 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 soft tissue cancer. Therefore, the mean standardized mortality ratio (SMR) for this cancer type in this area can be calculated at 0.58. Though, the value of this parameter may vary with an underlying probability of 99% between 0.06 and 2.11, 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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