

4.6 About the Munich Cancer Registry, its latest annual report and a list of figures and tables

This chapter describes the work of the Munich Cancer Registry (MCR) and aims to help English speaking colleagues, who are engaged in cancer prevention, to interpret results and compare data.

The third annual report of the MCR presents results of cancer registration in the city of Munich and the surrounding areas. As a special focus, the present annual report provides statistical analyses of oesophagus, stomach and prostate cancer. Nearly 7,600 general practitioners, 90 hospitals with about 500 departments and 437 communities will receive this issue. This report highlights the importance and the usefulness of population-based clinical data for physicians.

The MCR is part of the comprehensive Munich Cancer Centre and started registering patients in 1978. For the first years a few departments of the Ludwig-Maximilians-University and the Technical University Munich collaborated. The number of collaborating members grew continuously. These efforts have led to a world age-standardised incidence rate estimated to be 308/100,000 (237 for females) for Munich in 1998.

Bavaria has a total population of 12 million, the Federal Republic of Germany has 82 million people. The MCR collects cancer data from about 2.3 million people, which equals 2.8% of the German population. In 2002, the catchment area will be enlarged to 3.66 million people. The Bavarian Cancer Registration Law came into force at the beginning of 1998 allowing the MCR to legally process all death certificates from the catchment area. Tab. 8a/b illustrate the observed cancer related mortality for the Munich area. DCO-rate decreased to about 12% in 2000. The reduction of the current DCO-rate can be expected as a result of follow-back-procedures in the near future.

Each collaborating hospital receives a survey for all their treated patients, irrespective of their home address. Therefore the MCR also registers patients from outside the registration area. Since the beginning in 1994, the reports of 13 pathological institutions have been the basis for checking completeness of registration. In this way correctness of incidence rates may be roughly judged.

For data collection, 26 cancer-specific forms (fig. 4) have been developed. Often, copies of medical reports are sent to the registry as well. Co-operating hospitals additionally report on local and regional progressions and the occurrence of metastases. In this way, the course of malignant disease is described.

The MCR produces periodical reports for all co-operating hospitals to keep them informed of their clinical registries. The most common cancers in the region are analysed and the larger hospitals have their clinical results compared anonymously.

Aims, general conditions and co-operation status

1	Data flow from the 6 clinical cancer registries in Bavaria to the registry of the whole of Bavaria, divided into notification office (depersonalisation) and registration office (data storage&evaluation), and to the national cancer registry in Berlin	2
2	The diverse interests of a cancer registry	3
3	What information should be transmitted to a cancer registry, by whom and on which parts of the disease process?	6
4	Example of an MCR tumour-specific data collection form	7
5	The database and different ways of using the data	8

Results

6	Processed data and information in 2000	13
7a	Age-specific and age-standardised incidence rates for men in the city of Munich in 1998	14
7b	Age-specific and age-standardised incidence rates for women in the city of Munich in 1998	16
8a	Age-specific and age-standardised mortality rates for men in the Munich region for 1998 to 2000	20
8b	Age-specific and age-standardised mortality rates for women in the Munich region for 1998 to 2000	22
9	Percentage distribution of age-specific mortality for men in Germany in 1999	24
10	Percentage distribution of age- and tumour-specific mortality for men in Germany in 1999	24
11	Percentage distribution of age-specific mortality for women in Germany in 1999	25
12	Percentage distribution of age- and tumour-specific mortality for women in Germany in 1999	25
13	Comparison of cancer mortality between the Munich region in 1998 to 2000 and Germany in 1998	26
14	Extract from the new official death certificate	28
15	Cancer deaths in the 155 towns and villages in the catchment area in 1998 to 2000	30
16	Mapping cancer mortality at a local level in the MCR catchment area	33
17	Breast cancer: Incidence, mortality and proportion of pTis or pT1 patients in the 15 largest towns in the catchment area	34
18	Characteristics of the most common cancers	38
	S1: Number of patients with "good follow-up" and a single malignancy	
	S2-S6: Age at diagnosis	
	S2-S4: 10%, 50% (median), 90% of patients are younger than the indicated age at diagnosis	
	S5-S6: Mean age for men and women at diagnosis	
	S7: Percentage of new male cases	
	S8-S9: Median life expectancy (in years) from diagnosis for cured men and women	
	S10-S11: The official number of tumour related deaths in Germany in 1998 for males (109 thousand) and females (104 thousand)	
	S12-S15: Relative survival rate for 2, 5, and 10 years	
	S16-S17: 5- and 10-year overall survival (all causes of death)	
	S18: 5-year prevalence as a factor of incidence estimated from the overall survival curve	
	S19-S20: Cumulative incidence of secondary malignancies (Kaplan-Meier estimation)	
	S21: Percentage of patients (relative to S1) with at least a second malignancy, who were registered in addition to S1 (underestimated because of underreporting)	
	S22-S23: Number of person years and median follow-up time	
	S24-S27: Percentage distribution of pT findings since 1988	
	S28: Proportion of lymphnode positive findings	
	S29: Percentage patients with M1 at diagnosis	
	S30-S31: Time (in months) to 1st progression for M0 patients (50%, 90% quantiles)	
	S32-S33: Time (in months) from 1st progression to death (50%, 90% quantiles)	
	S34-S36: Survival time (in months) for M0 patients with at least one progression event (50%, 90% quantiles)	
	S36-S37: Mean survival time for M0 patients and all patients (incl. M1) with established progression	
	S38: Number of M0 patients with a progression recorded during the disease process	
	S39-S42: Percentage of metastases, local recurrences, regional lymphnode recurrences and unspecified (for solid tumours) progressions during the course of disease	
	S43-S50: Distribution of the 1st event with synchronous locations (locoregional recurrences, unspecified progression, lung, liver, bone, distant lymph node, CNS and unspecified metastases)	

Fig./Tab. (Abb./Tab.)		Page
19a	Relative survival of small-cell and non small-cell lung cancer patients before and after 1990	45
19b	Relative survival of non small-cell lung cancer patients before and after 1990 by UICC stage	45
20a	Relative survival of malignant melanoma patients in 5-year periods from 1974	46
20b	Relative survival of malignant melanoma patients before and after 1990 by tumour thickness	46
21a	Relative survival of breast cancer patients in 3-year periods from 1978	47
21b	Relative survival of breast cancer patients in 3-year periods from 1978 by pT-category	47
22	Rectal cancer: Patient evaluation and use of hospital support and communication systems	49
23a	Breast cancer: Frequency of arm problems in the 9 largest clinics	50
23b	Breast cancer: Improvement in quality of life with reduction in arm problems	50

Special focus: Oesophagus, stomach and prostate cancer

24	Time series analysis of age-standardised mortality for oesophagus, stomach and prostate cancer in Germany from 1980 to 1999	51
25	Epidemiological characteristics of oesophagus, stomach and prostate cancer	52
26	Age-specific stomach cancer mortality in men and women in Germany in 1970, 1980, 1990 and 1999	53
27	Age-specific prostate cancer mortality in Germany	53
28	Age-specific incidence and age distribution at diagnosis of oesophagus, stomach and prostate cancer	54

Oesophagus cancer

29	Changes in clinical characteristics since 1978	56
30	Changes in treatment strategies since 1978	57
31	Distribution of clinical and epidemiological characteristics by T-category for all patients since 1988	57
32	Distribution of clinical and epidemiological characteristics by tumour site for all patients since 1988	57
33	Distribution of clinical and epidemiological characteristics by histology for all patients since 1988	57
34	Overall survival of patients and expected survival of an age-matched normal population sample before and after 1988	58
35	Overall survival by UICC stage before and after 1988	58
36	Relative survival by histology	59
37	Relative survival by tumour site	59

Stomach cancer

38	Changes in clinical characteristics since 1978	63
39	Changes in histology and in treatment strategies since 1978	63
40	Distribution of clinical and epidemiological characteristics by T-category for all patients since 1988	63
41	Distribution of clinical and epidemiological characteristics by age for all patients since 1988	64
42	Distribution of clinical and epidemiological characteristics by UICC stage for all patients since 1988	64
43	Relationship between disease-free time to distant metastatisation and time from metastatisation to death by T-category	65
44	Overall survival and relative survival of patients and expected survival of an age-matched normal population sample before and after 1988	65
45	Overall survival by UICC stage before and after 1988	66
46	Relative survival by UICC stage before and after 1988	66
47	Relative survival by UICC stage with subclassification since 1988	67
48	Relative survival by grading	67
49	Relative survival by Lauren classification	68
50	Relative survival by histology	68

Fig./Tab. (Abb./Tab.)		Page
51	Survival from time of diagnosis for patients with tumour progression	69
52	Survival from time of tumour progression	69
53	Distribution of clinical and treatment factors of patients in the co-operating primary treatment clinics since 1988	70
54	Relative survival of all patients in participating clinics since 1988	70

Prostate cancer

55	Changes in epidemiological characteristics in the city of Munich since 1978	74
56	Changes in clinical characteristics since 1978	74
57	Changes in treatment measures since 1978	74
	BPH: benign prostatic hypertrophy	
	DRE: digital rectal examination	
	PSA: prostate-specific antigen	
	PVE: radical prostatectomy (prostate gland and seminal vesicles, RP)	
	TRUS: transrectal ultrasound	
	TUR: transurethral resection of the prostate (TURP)	
58	Methods of prostate cancer detection since about 1992	75
59	Distribution of clinical parameters by T-category for all patients since 1988	75
60	Distribution of grading by PSA for patients since 1992	76
61	Distribution of age, PSA and grading by TNM-group	76
62	Treatment measures by TNM-group	76
63	Distribution of preT versus pT since 1988	77
64	Clinical parameters by histology since 1988 (for radical operations)	77
65	Time to progression for M0 patients, survival time from progression to death, and overall survival time from diagnosis for patients with progression	79
66	Relative survival by PSA and grading combined after 1992	79
67	Survival from progression for different events	80
68	Survival from established metastasisation in specific locations	80
69	Relationship between disease free-time to distant metastasisation and time from metastasisation to death by T-category	81
70	Overall survival, relative survival and expected survival of patients and an age-matched normal population sample before and after 1988	81
71	Overall survival by T-category before and after 1988	82
72	Relative survival by T-category before and after 1988	82
73	Relative survival by sub-categories T2a-b and T3a-b	83
74	Relative survival by TNM-combinations since 1988	83
75	Relative survival by pTNM-combinations for radically operated patients since 1988	84
76	Relative survival by grading	84
77	Relative Survival in treatment groups since 1988	85
78	Distribution of age and principal clinical factors in the co-operating urological clinics from 1988 to the present	86
79	Treatment measures in the co-operating urological clinics since 1988	86
80	Relative survival of radically operated patients in participating urological clinics since 1988	87
81	Relative survival of not radically operated patients in participating urological clinics since 1988	87
82	Relative survival of all patients in participating urological clinics since 1988 irrespective of treatment	88
83	Distribution of the main findings of participating pathological laboratories	88

Appendix

84	Life expectancy in the normal population of the German republic before reunification	99
85	Various figures for cancer mortality	100
86	Six prevention levels for cancer	101
87	Age distribution of the population in the catchment area in 2000	104