

# Munich Cancer Registry



- ▶ Incidence and Mortality
- ▶ Selection Matrix
- ▶ Homepage
- ▶ *Deutsch*

## P-NET: Pancr. neuroend. tumor

### Survival

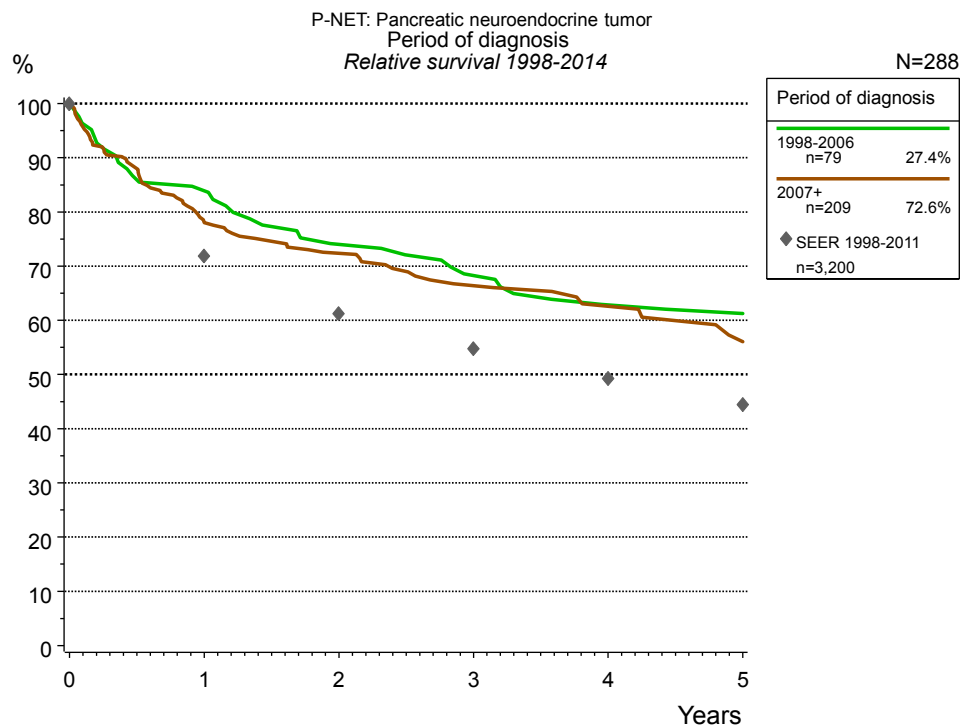
Year of diagnosis	1998-2014
Patients	363
Diseases	363
Cases evaluated	288
Creation date	04/11/2016
Export date	12/23/2015
Population	4.64 m



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

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

<http://www.tumorregister-muenchen.de/en/facts/surv/shPNETE-P-NET-Pancr.-neuroend.-tumor-survival.pdf>

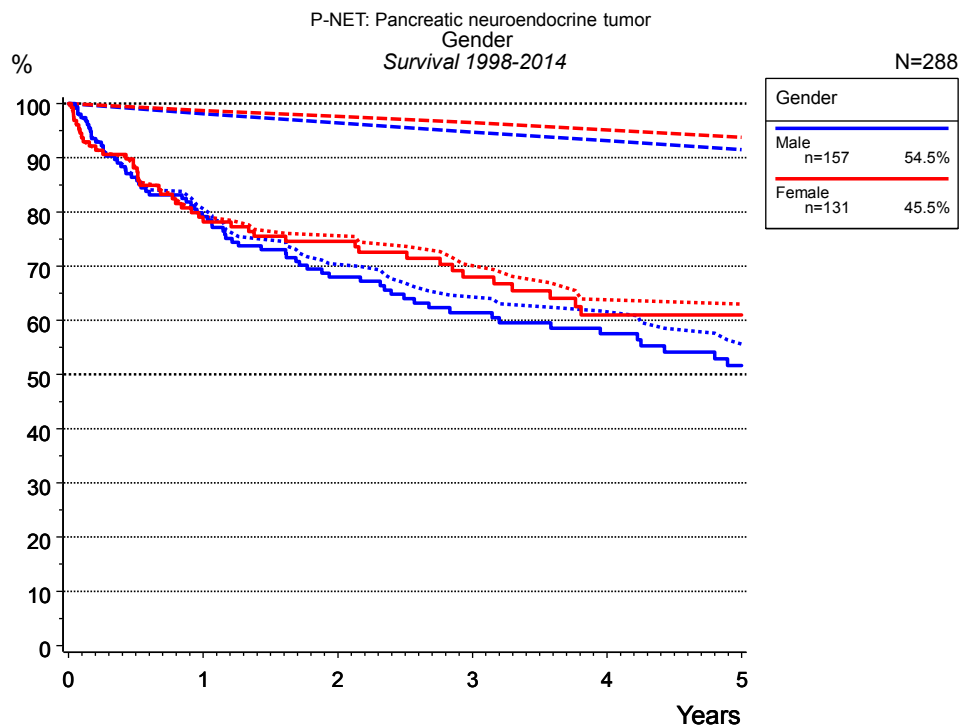


**Figure 1a.** Relative survival of patients with pancr. neuroend. tumor by period of diagnosis. Included in the evaluation are 288 cases diagnosed between 1998 and 2014.

The presented survival curves are derived from clinical records with valid follow-up informations, which means that death certificate cases (DCO) cases are omitted from the analysis. With this one restriction, the MCR has provided population-based statistics since 1998, collecting data on all cancer cases in the region of southern Bavaria. Historical data of previous time periods can be heavily selected, therefore, univariate survival comparisons of the presented time periods must be carefully considered. Nonetheless, all calculable survival curves are depicted to facilitate the comparison of long time follow-up analyses of relative survival between particular cancers.

Years	Period of diagnosis			
	1998-2006 n=79		2007+ n=209	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	83.5	83.9	76.8	78.0
2	72.0	74.0	70.5	72.4
3	65.5	68.3	63.9	66.4
4	59.1	62.9	59.6	62.6
5	57.8	61.3	53.2	56.1

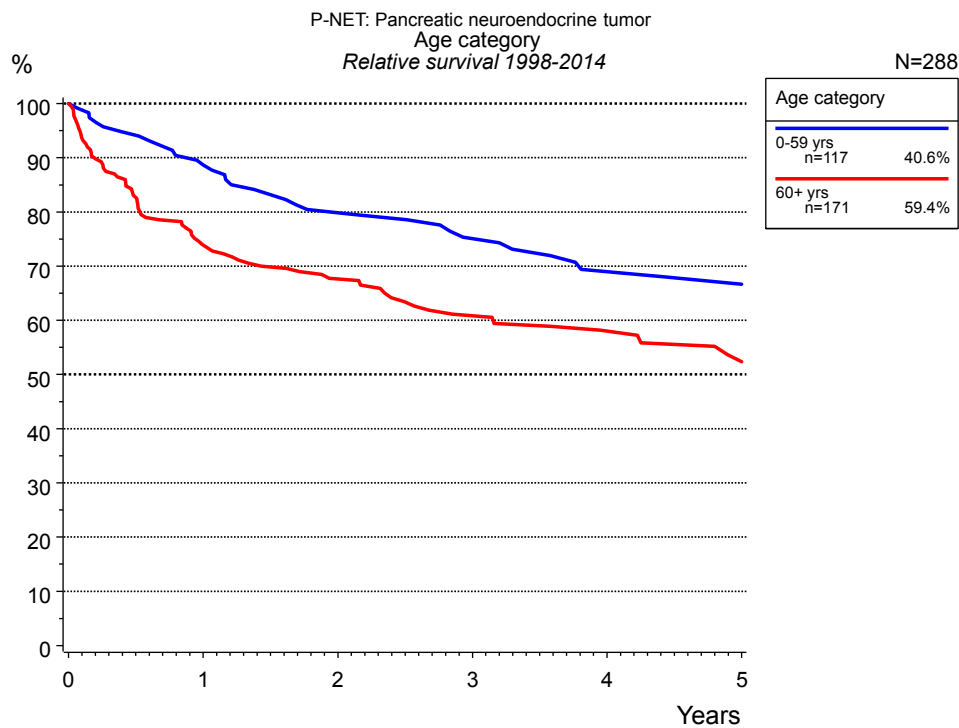
**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with pancr. neuroend. tumor by period of diagnosis for period 1998-2014 (N=288).



**Figure 2a.** Survival of patients with pancr. neuroend. tumor by gender. Included in the evaluation are 288 cases diagnosed between 1998 and 2014.

Years	Gender			
	Male n=157		Female n=131	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	79.2	80.6	78.2	79.1
2	68.0	70.3	74.6	75.6
3	61.4	64.3	68.0	70.1
4	57.6	61.6	61.0	63.8
5	51.7	55.6	61.0	63.0

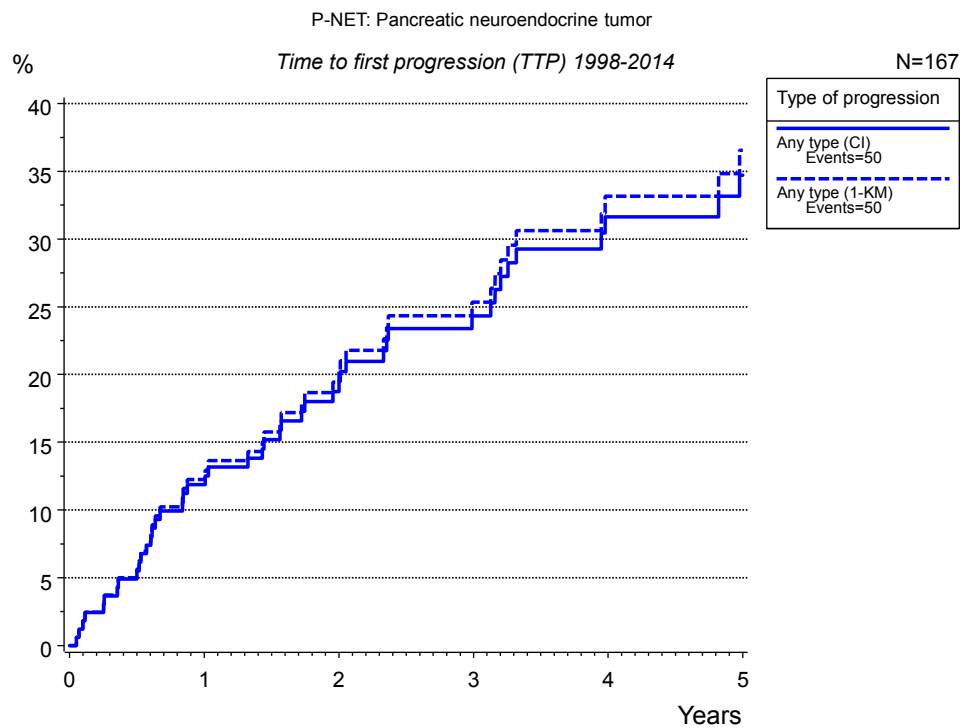
**Table 2b.** Observed (obs.) and relative (rel.) survival of patients with pancr. neuroend. tumor by gender for period 1998-2014 (N=288).



**Figure 3a.** Relative survival of patients with pancr. neuroend. tumor by age category. Included in the evaluation are 288 cases diagnosed between 1998 and 2014.

Years	Age category			
	0-59 yrs n=117		60+ yrs n=171	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	88.4	88.7	72.2	73.9
2	80.0	79.9	64.6	67.7
3	74.6	75.1	56.9	60.8
4	68.5	69.0	52.4	58.0
5	66.9	66.6	46.9	52.4

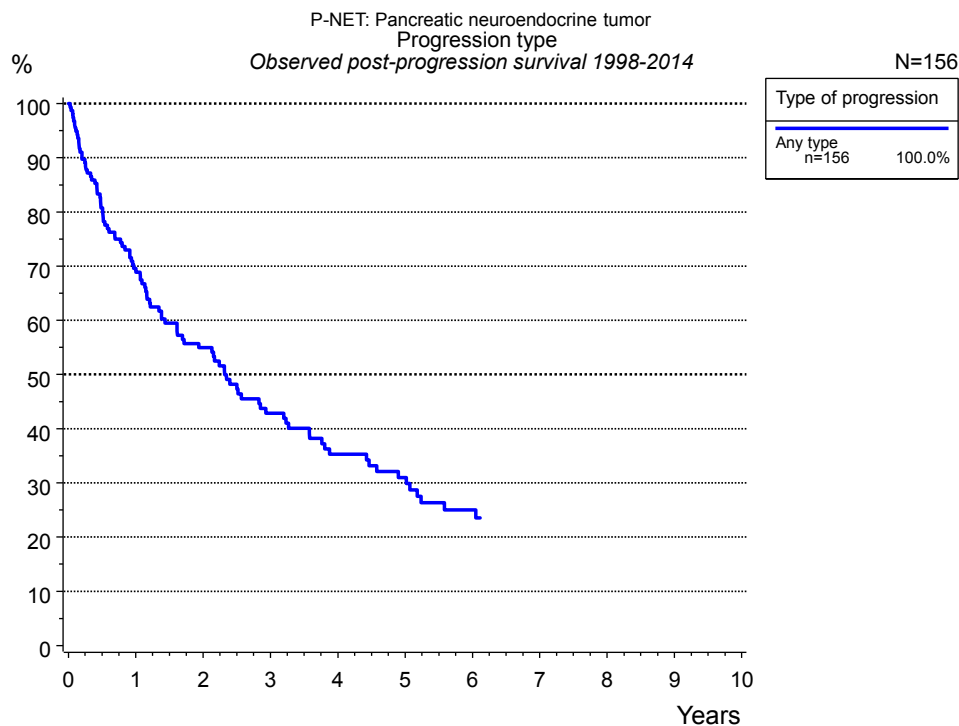
**Table 3b.** Observed (obs.) and relative (rel.) survival of patients with pancr. neuroend. tumor by age category for period 1998-2014 (N=288).



**Figure 5a.** Time to first progression of 167 patients with pancr. neuroend. tumor diagnosed between 1998 and 2014 (M0 only in solid cancers) estimated by cumulative incidence function (CI, solid line) accounting for death as competing risk and by inverse Kaplan-Meier estimate (1-KM, dashed line). The frequency of events may be underestimated due to underreporting.

Years	Type of progression	
	Any type (CI)	Any type (1-KM)
	n=167 %	n=167 %
0	0.0	0.0
1	11.9	12.3
2	18.7	19.5
3	24.3	25.3
4	31.6	33.2
5	34.7	36.6

**Table 5b.** Time to first progression of patients with pancr. neuroend. tumor for period 1998-2014 (N=167).

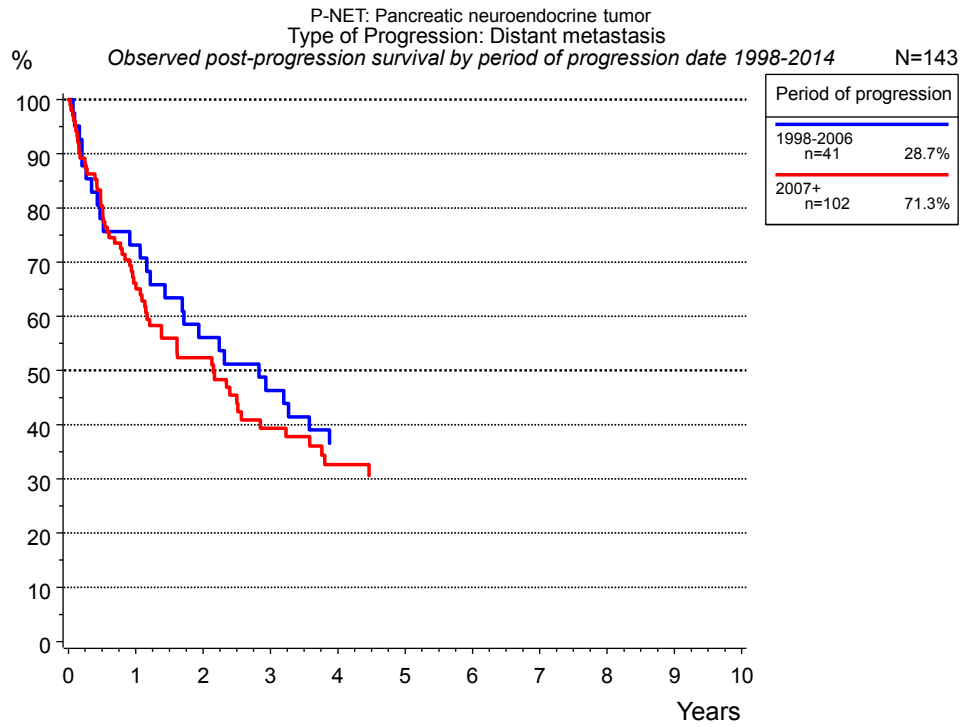


**Figure 5c.** Observed post-progression survival of 156 patients with pancr. neuroend. tumor diagnosed between 1998 and 2014. These 156 patients with documented progression events during their course of disease represent 54.7 % of the totally 285 evaluated cases (incl. M1, n=118, 41.4 %). Patients with cancer relapse documented via death certificates only were excluded (n=12, 4.2 %).

Medical record documentation often lacks the linguistic severity to distinguish between local relapse, regional lymph node metastasis and distant spread in solid cancers. Frequently, the statement “not specified” is the only information in registries regarding relapse of the disease. The category “Any type” denotes all cases who suffered from at least one relapse during the course of disease (incl. primary M1-status). Although, the real number of relapsed patients is likely to be much higher. The accumulated percentage of patients with local relapse or distant metastasis exceeds the 100% value because patients are potentially considered in more than one subgroup.

Type of progression	
Any type n=156	
Years	%
0	100.0
1	68.9
2	54.9
3	42.8
4	35.3
5	31.0
6	25.0

**Table 5d.** Observed post-progression survival of patients with pancr. neuroend. tumor for period 1998-2014 (N=156).



**Figure 5e.** Observed post-progression (distant metastasis) survival of 143 patients with pancr. neuroend. tumor diagnosed between 1998 and 2014 by period of progression.

Period of progression		
Years	1998-2006	2007+
	n=41	n=102
	%	%
0	100.0	100.0
1	73.2	65.1
2	56.1	52.4
3	46.3	39.4
4	36.6	32.6

**Table 5f.** Observed post-progression (distant metastasis) survival of patients with pancr. neuroend. tumor for period 1998-2014 by period of progression (N=143).

## Shortcuts

MCR Munich Cancer Registry, Germany

NCI National Cancer Institute, USA

SEER Surveillance, Epidemiology, and End Results, USA

UICC Union for International Cancer Control, Geneva

DCO Death certificate only Death certificate provides the only notification to the registry.

NA Not available

NOS Not otherwise specified

OS Overall/Observed survival Overall/Observed survival (Kaplan-Meier estimate)

Date of entry: diagnosis  
Event: death from any cause

RS Relative survival Survival compared to “general population”, ratio of observed to expected survival (Ederer II method), reflecting cancer specific survival

AS Assembled survival Assembled chart of observed, expected, relative survival

CS Conditional survival Survival probability under the condition of surviving a given period of time

TTP Time to progression Time to first progression / relapse  
Date of entry: diagnosis  
Event: (progression / relapse): first local-, lymph node recurrence, distant metastasis or unspecified progression

1-KM 1 minus Kaplan-Meier estimator  
 (“inverse” Kaplan-Meier estimator)

CI Cumulative incidence  
Death as competing risk (according to Kalbfleisch und Prentice)

PPS Post-progression survival Survival since first progression / relapse (Kaplan-Meier estimate)  
Date of entry (progression / relapse): first local-, lymph node recurrence, distant metastasis or unspecified progression  
Event: death from any cause

## Recommended Citation

Munich Cancer Registry. Survival P-NET: Pancr. neuroend. tumor [Internet]. 2016 [updated 2016 Apr 11; cited 2016 Jun 1]. Available from: <http://www.tumorregister-muenchen.de/en/facts/surv/shPNETE-P-NET-Pancr.-neuroend.-tumor-survival.pdf>

## Copyright

The content of the public web site provided by the Munich Cancer Registry is available worldwide and free of charge. All documents are free to download, utilize, copy, print-out and distribute, providing that the MCR is referenced.

## Disclaimer

The Munich Cancer Registry reserves the right to not be responsible for the topicality, correctness, completeness or quality of the information provided. Liability claims regarding damage caused by the use of any information provided, including any kind of information which is incomplete or incorrect, will therefore be rejected.



**Index of figures and tables**

Fig./Tbl.		Page
1a	Relative survival by period of diagnosis (chart)	2
1b	Survival by period of diagnosis (table)	2
2a	Survival by gender (chart)	3
2b	Survival by gender (table)	3
3a	Relative survival by age category (chart)	4
3b	Survival by age category (table)	4
5a	Time to first progression (chart)	5
5b	Time to first progression (table)	5
5c	Observed post-progression survival (chart)	6
5d	Observed post-progression survival (table)	6
5e	Observed post-progression survival by period of progression (chart)	7
5f	Observed post-progression survival by period of progression (table)	7