Munich Cancer Registry

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P-NET: Pancr. neuroend. tumor

Survival

Year of diagnosis	1989-1997	1998-2019
Patients	21	671
Diseases	21	671
Cases evaluated	21	520

Creation date	01/28/2021
Database export	01/07/2021
Population	4.92 m

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

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

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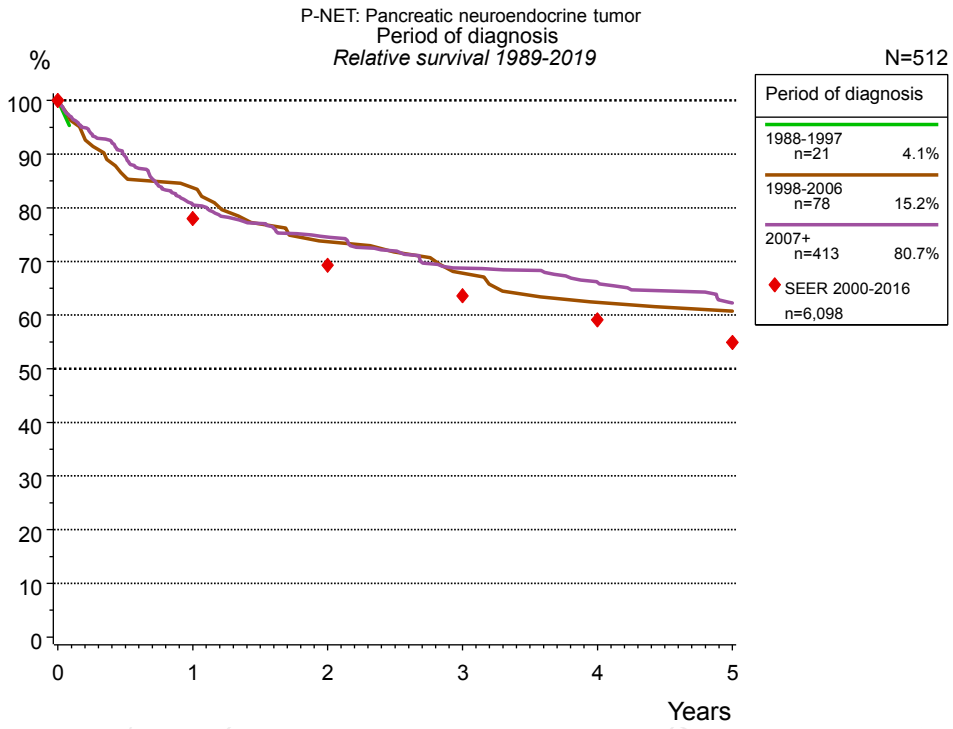

Figure 1a. Relative survival of patients with pancr. neuroend. tumor by period of diagnosis. Included in the evaluation are 512 cases diagnosed between 1989 and 2019.

The survival results of the SEER program (Surveillance, Epidemiology, and End Results) of the American National Cancer Institute (NCI) are summarized as the period of diagnosis from 2000 to 2016, and are represented by colored diamonds in order to facilitate comparisons between MCR and SEER.

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.

	Period of diagnosis					
	1988-1997 n=21		1998-2006 n=78		2007+ n=413	
Years	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1			83.3	83.7	79.3	80.5
2			71.6	73.7	72.6	74.5
3			65.1	67.8	65.9	68.8
4			58.6	62.3	62.4	66.1
5			57.3	60.7	57.8	62.3
Median			7.2		8.9	

Table 1b. Observed (obs.) and relative (rel.) survival of patients with pancr. neuroend. tumor by period of diagnosis for period 1989-2019 (N=512).

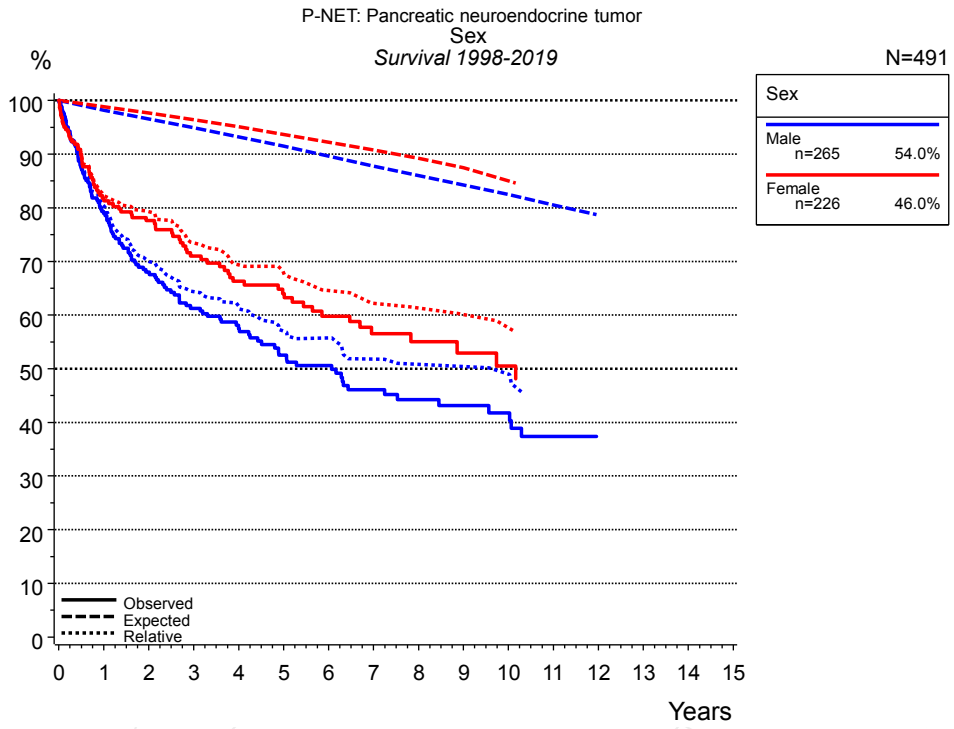

Figure 2a. Survival of patients with pancr. neuroend. tumor by sex. Included in the evaluation are 491 cases diagnosed between 1998 and 2019.

	Sex			
	Male n=265		Female n=226	
Years	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	78.9	80.4	81.3	82.2
2	68.0	70.1	77.6	79.3
3	61.3	64.4	71.0	73.4
4	57.5	61.6	66.3	69.4
5	52.6	57.0	64.0	67.9
6	50.6	55.7	59.8	64.6
7	46.1	51.8	56.5	62.2
8	44.3	50.8	55.0	61.3
9	43.1	50.4	52.9	60.1
10	41.8	49.0	50.5	57.6
11	37.4	45.4		
12	37.4	44.9		
Median	6.1		10.2	

Table 2b. Observed (obs.) and relative (rel.) survival of patients with pancr. neuroend. tumor by sex for period 1998-2019 (N=491).

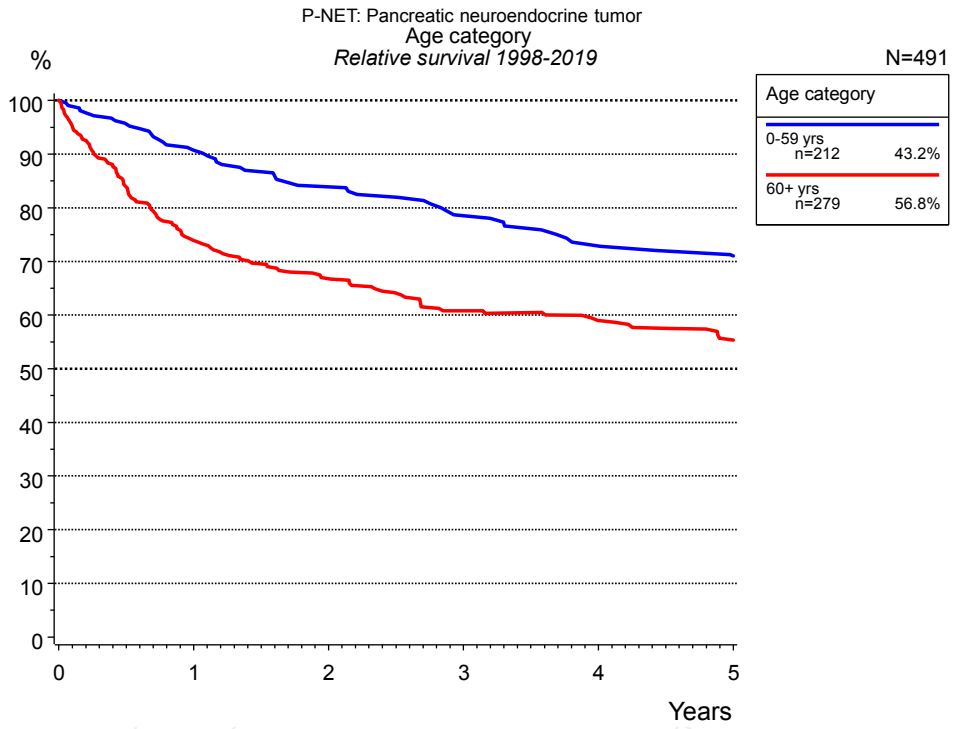

Figure 3a. Relative survival of patients with pancr. neuroend. tumor by age category. Included in the evaluation are 491 cases diagnosed between 1998 and 2019.

	Age category			
	0-59 yrs n=212		60+ yrs n=279	
Years	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	90.4	90.7	72.1	73.9
2	83.7	83.9	63.9	66.8
3	77.9	78.5	56.6	60.8
4	72.6	72.9	53.2	59.0
5	70.0	71.0	48.9	55.3
Median	12.9		4.9	

Table 3b. Observed (obs.) and relative (rel.) survival of patients with pancr. neuroend. tumor by age category for period 1998-2019 (N=491).

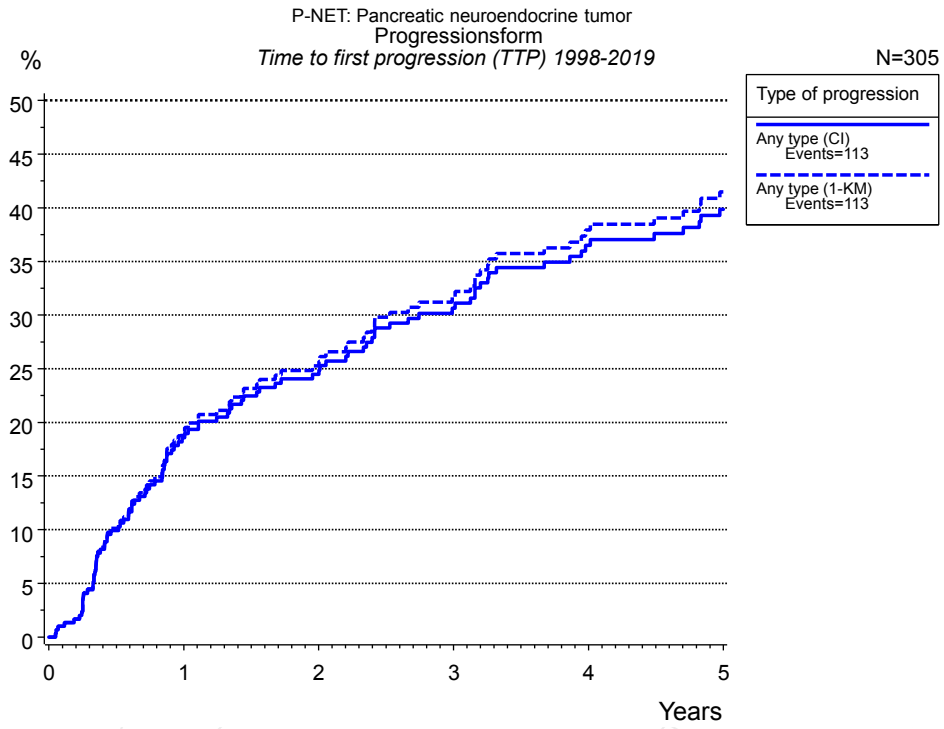

Figure 5a. Time to first progression of 305 patients with pancr. neuroend. tumor diagnosed between 1998 and 2019 (in solid cancers M0 only) estimated by cumulative incidence function (CI, solid line) accounting for death as competing risk and by inverse Kaplan-Meier estimate (1-KM, dashed line). The frequency of events may be underestimated due to underreporting.

Type of progression		
	Any type (CI)	Any type (1-KM)
N	305	305
Events	100	100
compet.	14	
Years	%	%
0	0.0	0.0
1	18.6	19.1
2	24.5	25.3
3	30.6	31.7
4	36.5	37.9
5	39.9	41.5

Table 5b. Time to first progression of patients with pancr. neuroend. tumor for period 1998-2019 (N=305), also showing the total of progression events (Events) and of deaths as competing risk (compet.).

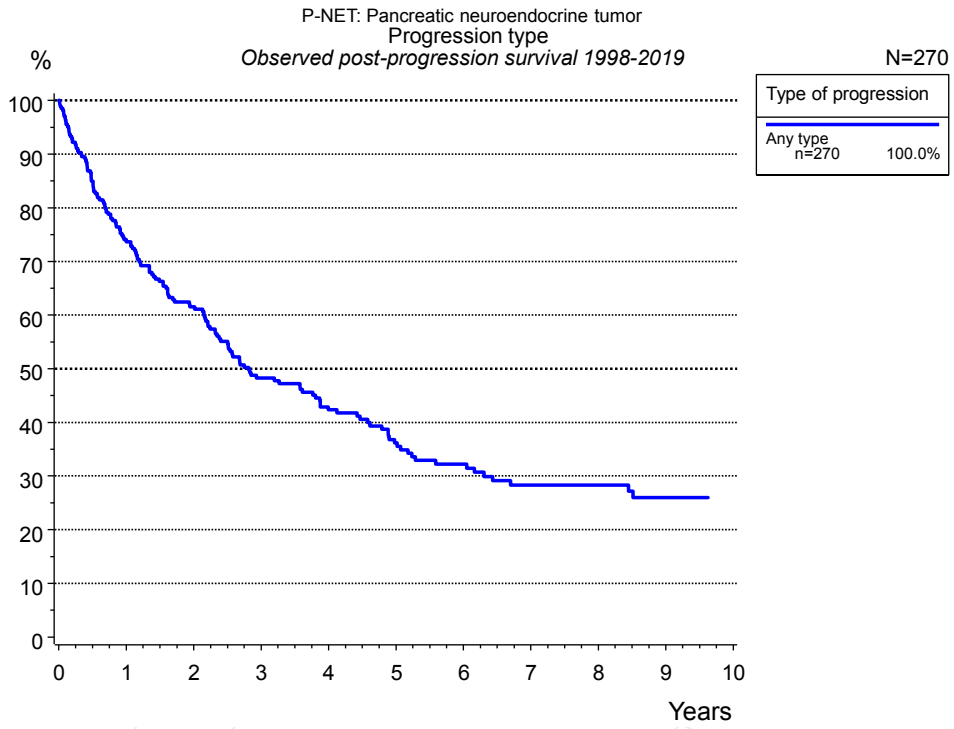

Figure 5c. Observed post-progression survival of 270 patients with pancr. neuroend. tumor diagnosed between 1998 and 2019. These 270 patients with documented progression events during their course of disease represent 55.4 % of the totally 487 evaluated cases (incl. M1, n=182, 37.4 %). Patients with cancer relapse documented via death certificates only were excluded (n=25, 5.1 %).

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 potientially considered in more than one subgroup.

Type of progression	
	Any type n=270
Years	%
0	100.0
1	73.6
2	61.5
3	48.3
4	42.3
5	36.2
6	32.2
7	28.3
8	28.3
9	26.0

Table 5d. Observed post-progression survival of patients with pancr. neuroend. tumor for period 1998-2019 (N=270).

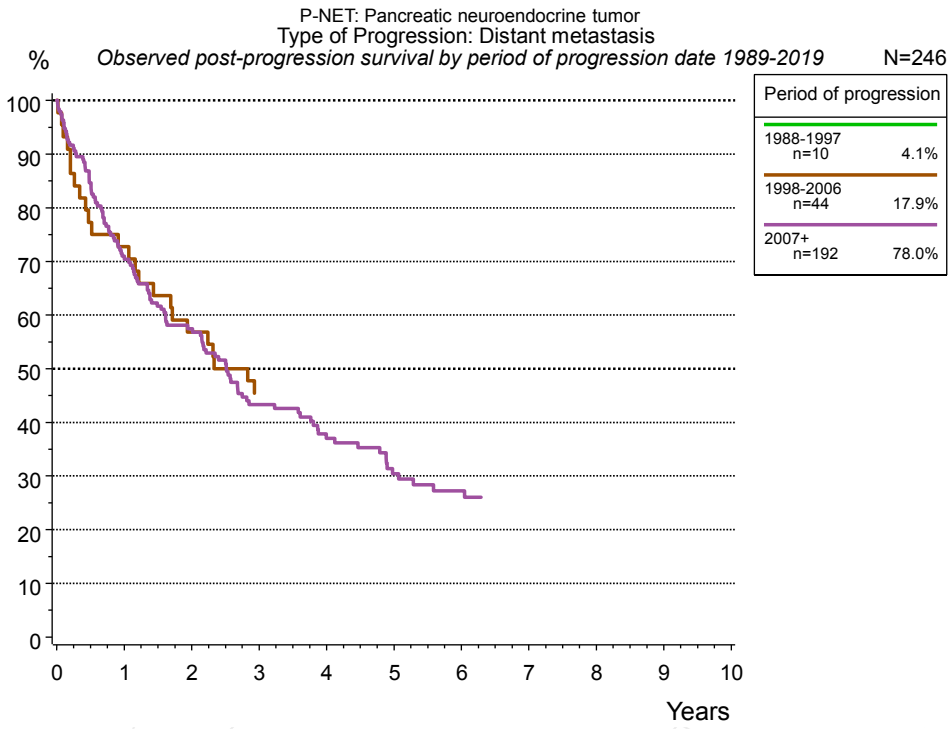

Figure 5e. Observed post-progression (distant metastasis) survival of 246 patients with pancr. neuroend. tumor diagnosed between 1989 and 2019 by period of progression.

	Period of progression	
	1998-2006 n=44	2007+ n=192
Years	%	%
0	100.0	100.0
1	72.7	70.4
2	56.8	57.4
3	45.5	43.3
4		37.0
5		30.4
6		27.3

Table 5f. Observed post-progression (distant metastasis) survival of patients with pancr. neuroend. tumor for period 1989-2019 by period of progression (N=246).

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

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