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Initial treatment and survival in a national unselected Danish cohort of 4163 patients with pancreatic cancer

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Background

Nationwide data on the efficacy of primary treatment on **overall survival (OS)** in an entirely unselected population of patients with pancreatic cancer (PC) have not been reported before.

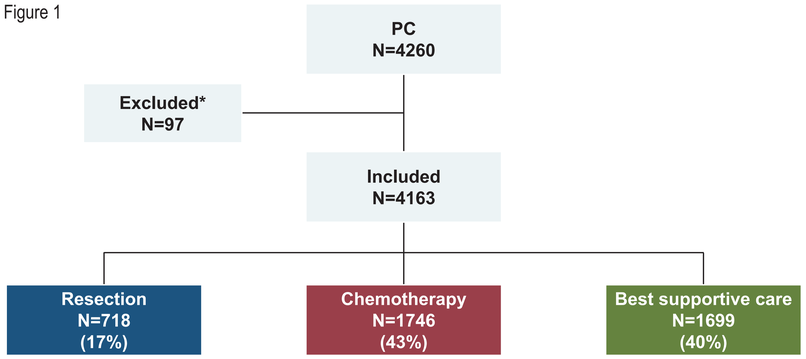
Aim

To investigate the effect of initial treatment on OS in all patients with PC in Denmark diagnosed in a recent five-year period.

Material and Methods

- From 1 May 2011 to 30 April 2016, 4260 patients were identified in the national Danish Pancreatic Cancer Database (DPCD), Figure 1.
- Patients' characteristics are presented in Table 1.
- OS was analysed from the date of the initial treatment, either resection or chemotherapy or from the date of diagnosis in case of best supportive care (BSC). Last clinical follow-up was 10 September 2017.
- Treatment and clinical outcome are presented in Figure 2, Table 2 and Figure 3.

Figure 1



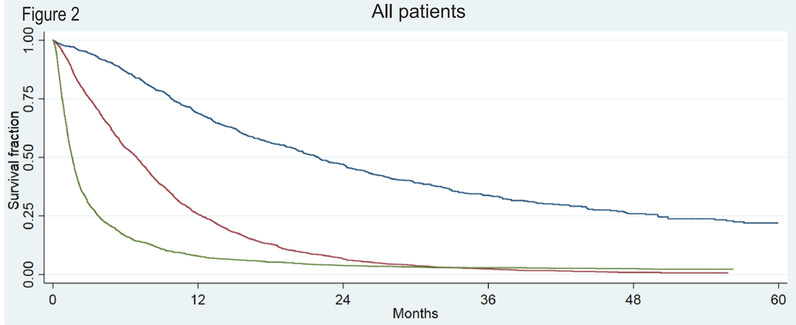
*Excluded: Preoperative/neoadjuvant chemotherapy followed by resection: 56, other malignancies: 26, incorrect registration of treatment: 13, lost to follow-up: 2.

Results

Table 1	Resection (n=718)	Chemotherapy (n=1746)	BSC (n=1699)	All (n=4163)
Age;years (median and range)	67 (13-86)	68 (34-90)	74 (24-100)	70 (13-100)
Gender				
Female	338 (47%)	813 (47%)	843 (50%)	1994 (48%)
Male	380 (53%)	933 (53%)	856 (50%)	2164 (52%)
Charlson comorbidity index				
0-2	561 (78%)	1301 (75%)	1024 (60%)	2886 (69%)
>3	157 (22%)	445 (25%)	675 (40%)	1277 (31%)
M-status*				
0	718 (100%)	905 (52%)	847 (50%)	1752 (51%)
1	0 (0%)	841 (48%)	852 (50%)	1693 (49%)
Diagnosis				
Pathology	718 (100%)	1642 (94%)	1288 (76%)	3648 (88%)
Clinical	0 (0%)	104 (6%)	411 (24%)	515 (12%)

Abbreviation; BSC: Best suppotive care.
* M-status; M1: patients coded with metastatic disease in DPCD within 60 days from diagnosis.

Figure 2



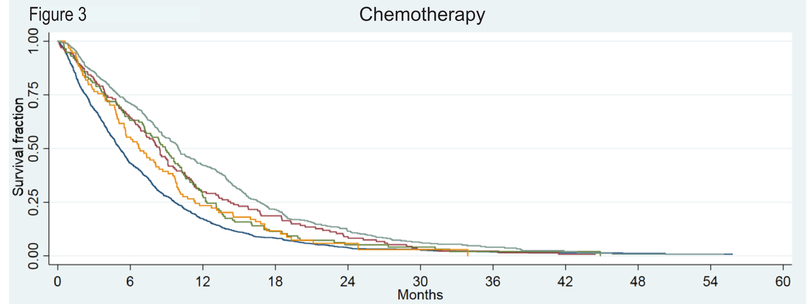
Treatment	Patients No.	Median overall survival, months (95% confidence interval)
Resection	718	21.9 (20.0-24.2)
Chemotherapy	1746	6.9 (6.4-7.3)
BSC*	1697	1.6 (1.5-1.7)

Abbreviation; BSC: Best supportive care.
*Two patients were excluded from the survival analyses due to diagnosis date = date of death.

Table 2 Resection		
Lymph node metastases*	Patients No.	Median overall survival, months (95% confidence interval)
N-	215	36.9 (28.6-44.7)
N+	465	17.5 (15.4-20.1)

Abbreviations; N-: Without lymph node metastases, N+: With lymph node metastases.
*38 patients without histopathological reports on lymph node status were excluded.

Figure 3



Regimen*	Patients No.	Median overall survival, months (95% confidence interval)
Gem monotherapy	938	5.1 (4.8- 5.6)
FOLFIRINOX	435	10.0 (9.2-11.0)
GemCap	134	8.4 (6.9-9.1)
GemS1	114	8.9 (7.2-10.3)
GemPac	94	6.7 (5.5-8.7)

Abbreviations: Gem: gemcitabine, FOLFIRINOX: 5-flourouracil, leucovorin, irinotecan and oxaliplatin, Cap: capecitabine, S1: tegafur/gimeracil/oteracil, Pac: nab-paclitaxel.
*31 patients with other regimens as initial treatment than those listed were excluded.

Conclusion

- Resected lymph node negative patients had the longest survival.
- Patients initially treated with chemotherapy (mono or combination) had slightly shorter median OS than found in randomised controlled trials.
- The outcome of gemcitabine monotherapy was poor, possibly reflecting less treatment effect and selection of less fit patients.
- To reduce the group of BSC patients, new diagnostic methods are required.

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