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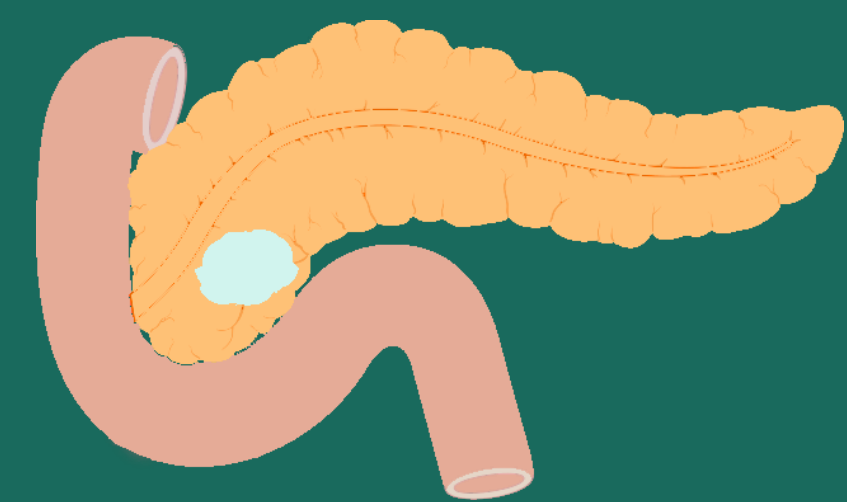
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# The effect of postoperative gemcitabine on overall survival in an unselected national Danish cohort of patients with pancreatic cancer treated with curative resection



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Department of Clinical Medicine, Faculty of Medicine, Aalborg University, Denmark<sup>2</sup> and on behalf of the Danish Pancreatic Cancer Group<sup>3</sup> (DPCG.dk).

## BACKGROUND

In Denmark, approximately 150 patients with pancreatic cancer (PC) undergo curative resection each year. Standard treatment is adjuvant gemcitabine. Randomised clinical trials (RCTs) using gemcitabine have shown a median overall survival (mOS) of 2 years and a 5-year survival rate of 15-20%. The effect of gemcitabine treatment outside trials is less clear.

## AIM

To examine the effect of postoperative gemcitabine treatment on mOS in an unselected national cohort of patients with PC in Denmark during a five year period.

## PATIENTS AND METHODS

- All patients with a curative resection in Denmark between 2011 and 2016 were identified in the Danish Pancreatic Cancer Database (DPCD).
- Data regarding age, gender, comorbidity, type of resection, vein resection, T/N/AJCC stage (Table 1), chemotherapy and clinical follow up were retrieved.
- 731 patients with ductal adenocarcinoma were treated with a curative PC resection.
- 108 patients were excluded: 30 patients died within 10 weeks postoperatively, 29 patients were treated with other regimens than gemcitabine and 49 patients were treated with preoperative chemotherapy.
- Of the remaining 623 patients, 409 (66%) received gemcitabine within 10 weeks after resection, the chemotherapy (CT) group, whereas 214 did not receive CT within 10 weeks, the none-chemotherapy (NCT) group (Table 2).

## RESULTS

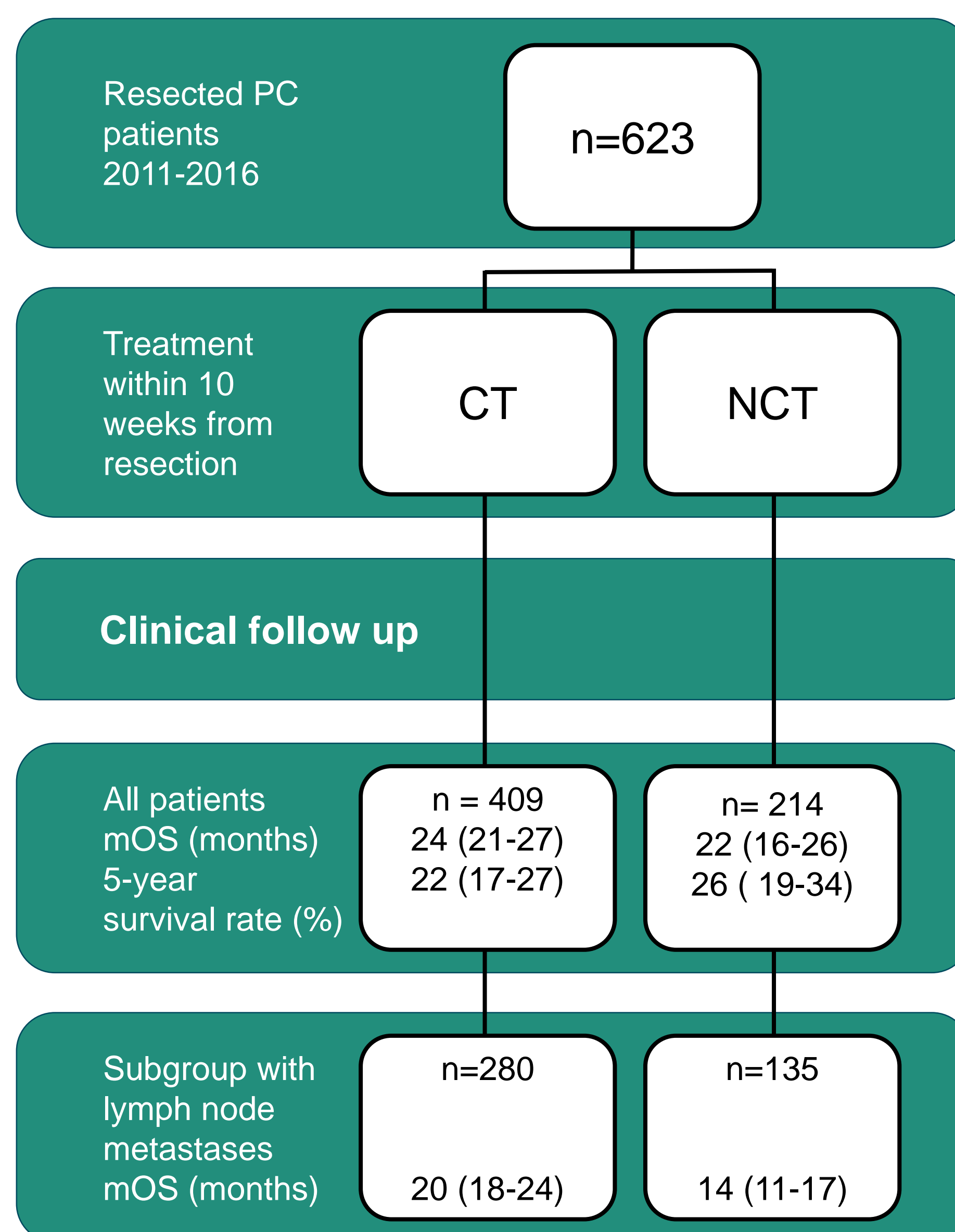
Table 1: Data on patients receiving postoperative gemcitabine within 10 weeks after resection (CT group) or not (NCT group)

	CT group	NCT group	p-value
<b>No. of patients</b>	409	214	
<b>Age (mean)</b>	67 (35-85)	70 (46-86)	p<0.01
<b>Age groups</b>			p<0.01
30-49	18 (5%)	9 (4%)	
50-69	237 (59%)	89 (42%)	
70-	154 (37%)	116 (54%)	
<b>Gender</b>			p=0.61
Female	196 (48%)	102 (48%)	
Male	213 (52%)	112 (52%)	
<b>Charlson Comorbidity Index</b>			p=0.33
0	177 (43%)	90 (42%)	
1 - 2	151 (37%)	71 (33%)	
>= 3	81 (20%)	53 (24%)	
<b>Type of resection</b>			p=0.69
Whipple	291 (71%)	147 (69%)	
Total	67 (16%)	41 (19%)	
Distal	51 (12%)	26 (12%)	
<b>Vein resection</b>			p=0.93
No	339 (83%)	178 (83%)	
Yes	70 (17%)	36 (17%)	
<b>T-stage</b>			p=0.18
T1	14 (3%)	12 (6%)	
T2	53 (13%)	23 (11%)	
T3	322 (79%)	160 (75%)	
T4	15 (4%)	13 (6%)	
Missing	5 (1%)	6 (3%)	
<b>N-stage</b>			p=0.33
N0	119 (29%)	71 (33%)	
N1	280 (68%)	135 (63%)	
Missing	10 (2%)	8 (4%)	
<b>AJCC/UICC</b>			p=0.43
Ia	12 (3%)	9 (4%)	
Ib	26 (6%)	13 (6%)	
Iia	81 (20%)	46 (22%)	
Iib	266 (65%)	125 (58%)	
III	15 (4%)	13 (6%)	
Missing	9 (2%)	8 (4%)	

T-stage: Tumor stage, N-stage: Lymph node stage, AJCC/UICC: 7th edition.

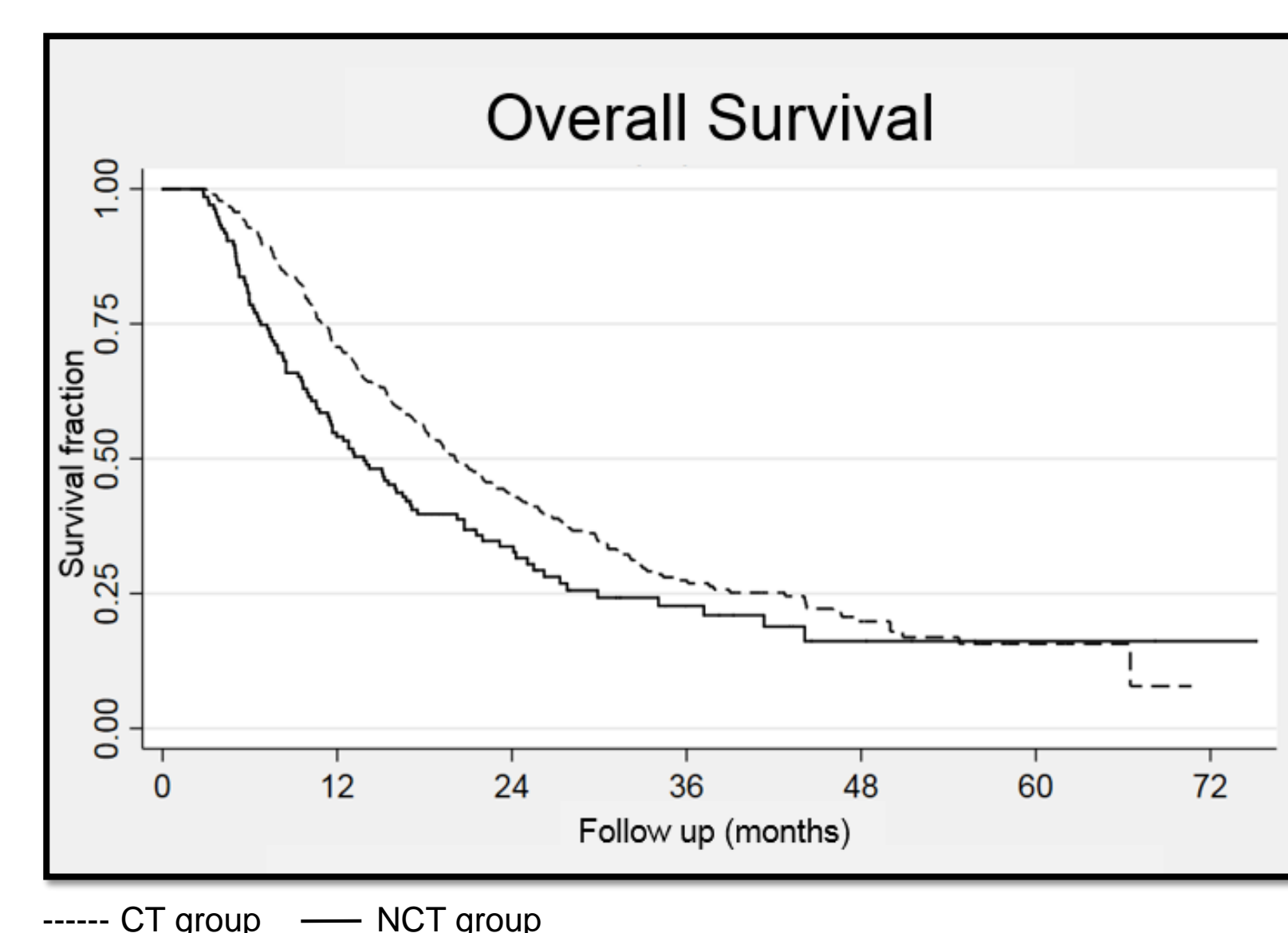
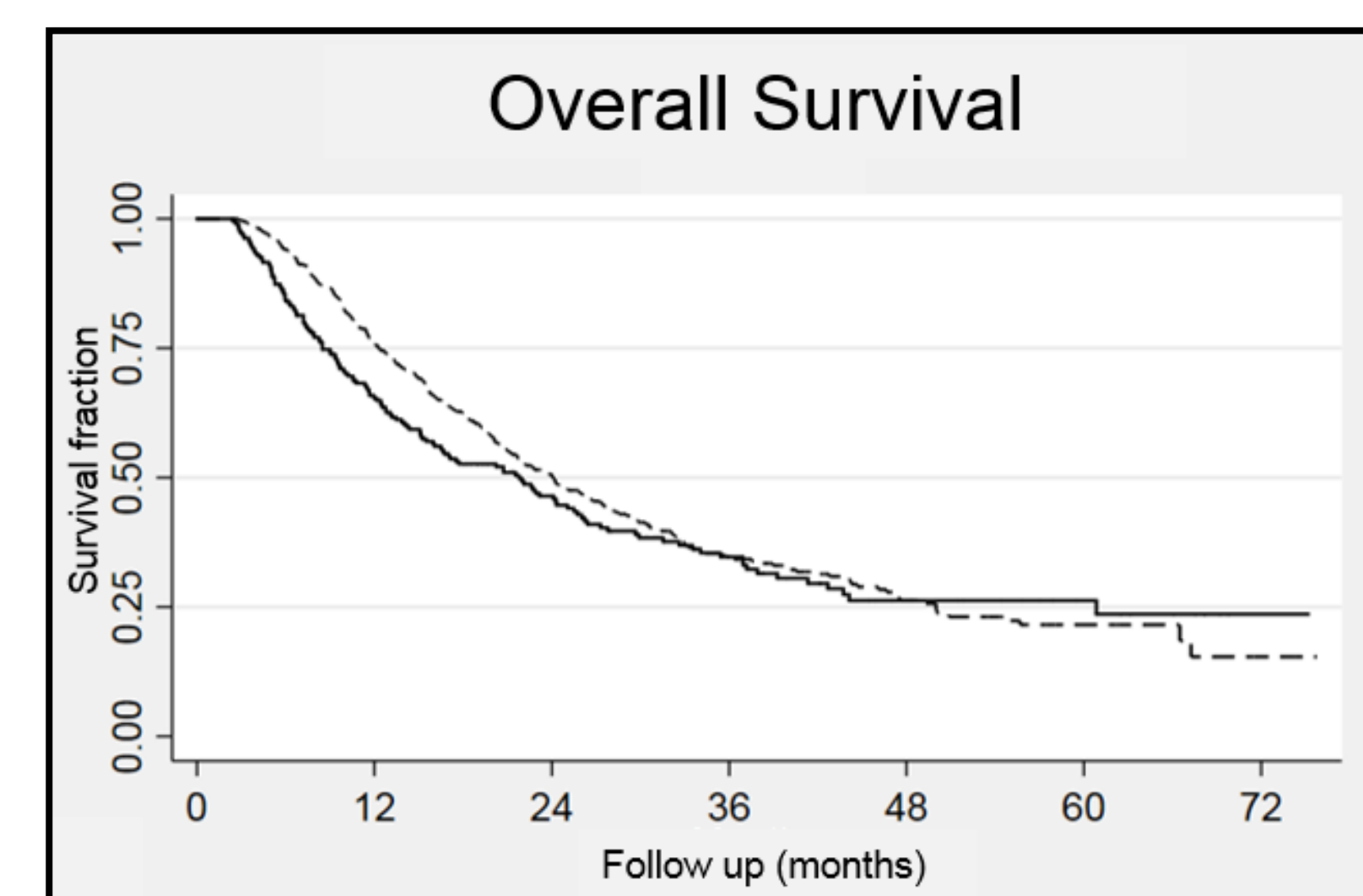
- Patients in the CT group were significantly younger than patients in the NCT group (p<0.001) (Table 1).
- No difference between the groups regarding gender, comorbidity, type of resection, vein resection or T/N/AJCC stage were found (Table 1).

Table 2: mOS according to postoperative gemcitabine (CT group) and no postoperative chemotherapy (NCT group) within 10 weeks after resection in all patients and in the subgroup of patients with lymph node metastases, as well as 5-year survival rate for all patients (95% CI)



- No significant differences in mOS and 5-year survival between the patients in the CT and NCT group were found (Table 2 and Figure 1).

Figure 1: Kaplan-Meier survival curves showing OS for all patients (top figure) and the subgroup of patients with lymph node metastases (bottom figure) according to postoperative gemcitabine (CT group) and no postoperative chemotherapy (NCT group) within 10 weeks after resection



- Patients with lymph node metastases showed a significantly better survival for the CT group with a mOS of 20 months versus 14 months in the NCT group (p=0.01) (Table 2 and Figure 1).

## CONCLUSION

In the national Danish cohort of patients with resected PC between 2011 and 2016, the 66% receiving postoperative gemcitabine had a mOS of 24 months and a 5-year survival rate of 22%, which are comparable to the adjuvant gemcitabine arms reported in the RCTs. The subgroup of patients with lymph node metastases treated with postoperative gemcitabine showed significantly better mOS than those not treated.

