

Supplementary Online Content

Jones RP, Psarelli E-E, Jackson R, et al; European Study Group for Pancreatic Cancer. Patterns of recurrence after resection of pancreatic ductal adenocarcinoma: a secondary analysis of the ESPAC-4 randomized adjuvant chemotherapy trial. *JAMA Surg*. Published online September 4, 2019. doi:10.1001/jamasurg.2019.3337

eTable 1. Multivariable Analysis of Overall Survival After Identification of Recurrence

eTable 2. Competing Risks Analysis for Local Recurrence Versus Distant Recurrence Versus Death Without Recurrence

eFigure 1. Postprogression Survival as Cumulative Incidence Plots From Time of Surgery

eFigure 2. Kaplan–Meier Curves Showing Survival from Time of Surgery

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable1. Multivariable analysis of overall survival after identification of recurrence.

Characteristic		Estimate (se)	Hazard ratio (95% CI)	P
Resection margin	Negative			
	Positive	0.33 (0.116)	1.39 (1.106, 1.744)	0.005
Tumor grade	Poor	Reference		
	Moderate	-0.67 (0.116)	0.51 (0.406, 0.64)	<0.001
	Well	-0.75 (0.225)	0.47 (0.303, 0.732)	<0.001
Local invasion	No	Reference		
	Yes	0.23 (0.108)	1.26 (1.018, 1.554)	0.034
Smoking status	Never	Reference		
	Past	0.11 (0.121)	1.11 (0.878, 1.41)	0.38
	Present	0.38 (0.15)	1.46 (1.087, 1.957)	0.012
Site of recurrence	Local	Reference		
	Distant	-0.21 (0.111)	0.81 (0.649, 1.004)	0.054
Pre-operative CRP level		0.2 (0.055)	1.22 (1.095, 1.361)	<0.001
Treatment arm	Gemcitabine	Reference		
	Gemcitabine plus capecitabine	-0.23 (0.11)	0.79 (0.64, 0.982)	0.034

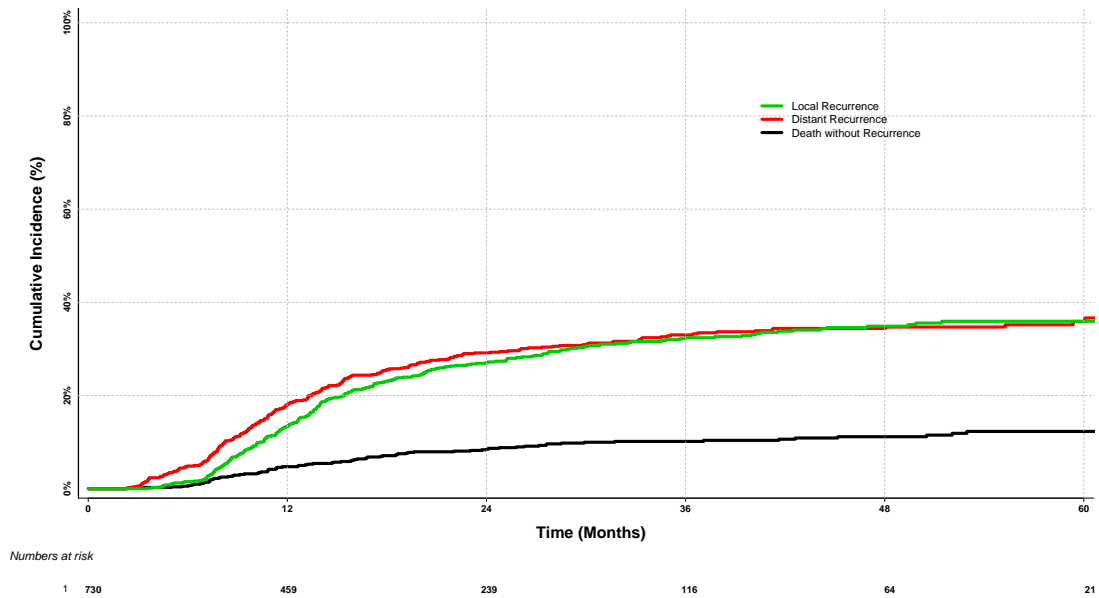
eTable 2. Competing risks analysis for local recurrence versus distant recurrence versus death without recurrence. Where boxes are blank, the factor did not reach significance on univariate modeling for inclusion in the competing risks model.

Characteristic		Local Recurrence			Distant Recurrence			Death Without Recurrence		
		Est (se)	95% CI	P	Est (se)	95% CI	P	Est (se)	95% CI	P
N stage	0	Reference								
	1	0.56 (0.206)	1.76 (1.174,2.633)	0.006	0.34 (0.201)	1.41 (0.95,2.092)	0.09	0.53 (0.387)	1.7 (0.797,3.638)	0.17
	2	1.03 (0.211)	2.81 (1.859,4.258)	<0.00 1	0.77 (0.206)	2.16 (1.443,3.229)	<0.00 1	1.14 (0.391)	3.13 (1.456,6.737)	0.003
Maximum Tumour Size		0.12 (0.057)	1.12 (1.005,1.255)	0.04						
R Status	Negative	Reference								
	Positive	0.17 (0.142)	1.19 (0.899, .566)	0.23	-0.01 (0.136)	0.99 (0.755,1.287)	0.92	0.21 (0.248)	1.23 (0.759,2.005)	0.4
Treatment Allocation	Gemcitabine	Reference								
	Gemcitabine plus Capecitabine	-0.27 (0.132)	0.77 (0.592,0.992)	0.043	0.01 (0.129)	1.01 (0.782,1.295)	0.96	-0.3 (0.229)	0.74 (0.473,1.161)	0.19
Pre Op. CA19.9					0.28 (0.046)	1.32 (1.207,1.443)	<0.00 1	0.35 (0.072)	1.41 (1.226,1.628)	<0.00 1

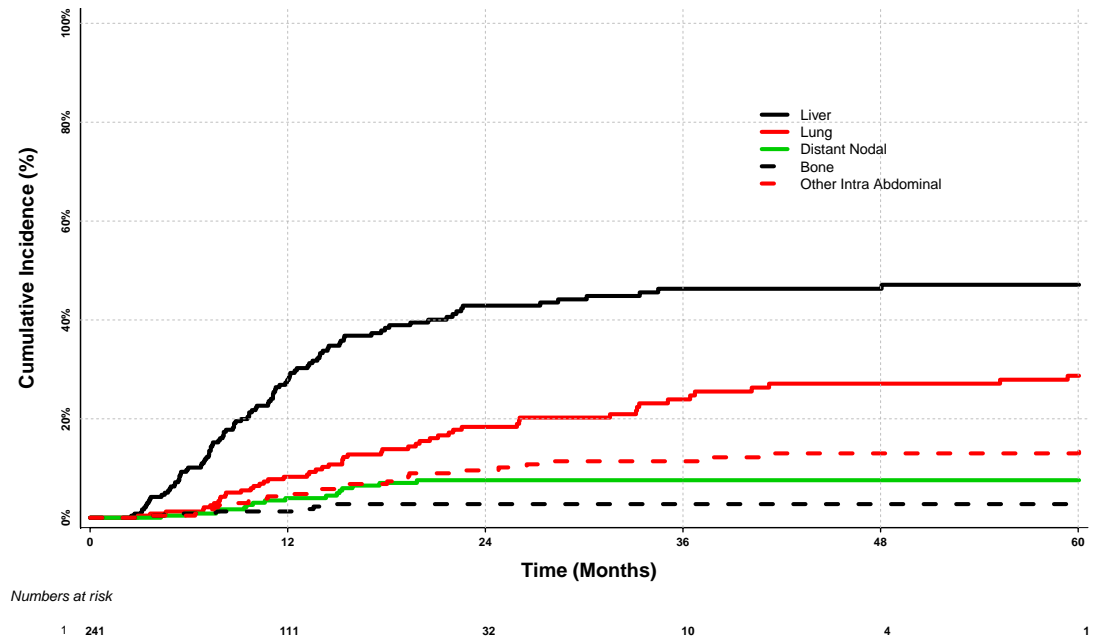
Tumour Differentiation	Poorly/Undifferentiated	Reference								
	Moderately Differentiated				-0.53 (0.259)	0.59 (0.355,0.982)	0.043			
	Well Differentiated				-0.49 (0.136)	0.61 (0.468,0.798)	<0.001			

eFigure 1. Post progression survival as cumulative incidence plots from time of surgery.

(a) Local vs. distant recurrence vs. death without recurrence.

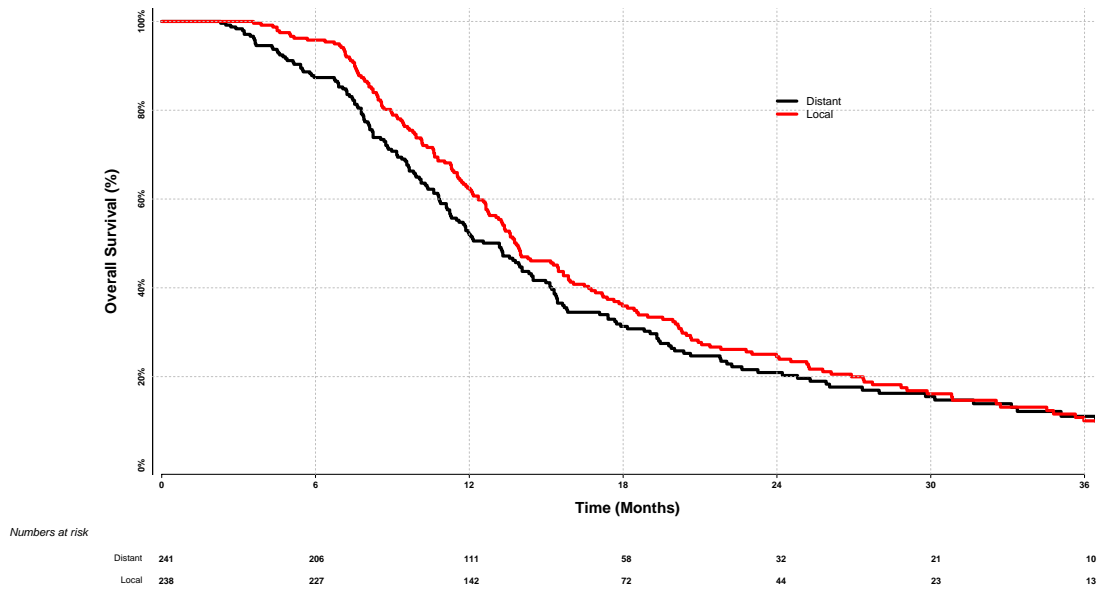


(b) Site of distant recurrence by organ.



eFigure2. Kaplan – Meier curves showing survival from time of surgery.

(a) Recurrence stratified by local versus distant disease.



(b) Recurrence stratified by organ of recurrence.

