

Supplemental online content for:

## **FDG-PET Predicts Neoadjuvant Therapy Response and Survival in Borderline Resectable/Locally Advanced Pancreatic Adenocarcinoma**

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**eTable 1:** Descriptive Cohort Demographics and Variables

**eTable 2:** Univariate RFS and OS Models

**eTable 1. Descriptive Cohort Demographics and Variables**

Variable	n (%)
Total, N	202
Sex	
Male	117 (58)
Female	85 (42)
Ethnicity	
Non-Hispanic or Latino	190 (94.1)
Hispanic or Latino	3 (1.5)
Other/Unknown/Chose not to disclose	9 (4.4)
Race	
White	187 (92.6)
Black/African American	2 (1)
Asian	7 (3.4)
Other	4 (2)
Unknown	2 (1)
Age at surgery	
Mean [SD], y	65 [9.8]
Median (range), y	65 (24.2–85.6)
≥65 y	101 (50)
CA 19-9 at diagnosis	
Mean [SD], U/mL	563 [1,829]
Median (range), U/mL	106 (0–20,860)
>500 U/mL	62 (31)
>1,000 U/mL	44 (22)
CA 19-9 elevated at diagnosis	
Yes	135 (67)
No	42 (23)
Nonsecretors	21 (10)
NAT type	
Any FOLFIRINOX	179 (89)
Any GA	117 (58)
Chemotherapy switch	94 (47)
Total chemotherapy cycles	
Mean [SD]	8.8 [3.6]
Median	8
Range	2–28
Days between end of NAT and preoperative FDG-PET scan	
Mean [SD]	34.8 [13.8]
Median	32.5
Range	7–128
CA 19-9 response categories	
1: Elevated and normalized	71 (35)
2: Elevated and stayed elevated	64 (32)
3: Normal and stayed normal	46 (23)
4: Nonsecretors	21 (10)

(continued in next column)

**eTable 1. Descriptive Cohort Demographics and Variables (cont.)**

Variable	n (%)
Optimal CA 19-9 levels post-NAT	
Yes	117 (58)
No	85 (42)
Major CA 19-9 response (only those with initial CA 19-9 elevation)	
Yes	71 (53)
No	64 (47)
Chemoradiation	
Yes	183 (91)
No	19 (9)
FDG-PET scan type	
PET/CT	35 (17)
PET/MRI	167 (83)
>1 PET before surgery	
Yes	182 (90)
No	20 (10)
Pre-NAT baseline PET	
Yes	122 (60)
No	80 (40)
Avid tumor at first baseline PET (chemotherapy-naïve)	118 (97)
SUV at first baseline PET (chemotherapy-naïve), mean [SD]	6.5 [2.4]
Avid tumor at first baseline PET (previous chemotherapy)	58 (73)
SUV at first baseline PET (previous chemotherapy), mean [SD]	3.9 [1.4]
Days from last PET to surgery, mean [SD]	11.5 [13]
Avid regional lymph nodes on PET	
Avid	40 (19.8)
Nonavid	162 (80.2)
Metabolic (PET) response	
Major	104 (52)
Minor	98 (49)
Surgery	
Whipple	100 (49.5)
Total pancreatectomy	56 (27.7)
Distal pancreatectomy	46 (22.8)
Vascular resection	
Yes	134 (66)
No	68 (34)
Resection margin status	
Positive	5 (3)
Negative	197 (97)
Positive lymph nodes	
Yes	42 (21)
No	160 (79)

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<b>eTable 1. Descriptive Cohort Demographics and Variables (cont.)</b>	
<b>Variable</b>	<b>n (%)</b>
Lymphovascular invasion	
Yes	21 (10)
No	181 (90)
Perineural invasion	
Yes	76 (38)
No	126 (62)
Pathologic treatment response	
Score 0: complete	27 (13)
Score 1: near-complete	50 (25)
Score 2: partial	108 (54)
Score 3: none	17 (8)
Major pathologic response (0 or 1)	
Yes	77 (38)
No	125 (62)
90-day operative mortality	
Yes	13 (6)
No	189 (94)
Postoperative chemotherapy	
Adjuvant (before progression and/or recurrence)	17 (9)
Palliative (after progression and/or recurrence)	27 (14)
No	145 (77)
Any recurrence	
Yes	82 (41)
Distant recurrence	63 (77)
No	120 (59)
Alive at last follow-up	
Yes	140 (69)
No	62 (31)

Abbreviations: FOLFIRINOX, fluorouracil/leucovorin/irinotecan/oxaliplatin; F/U, follow-up; GA, gemcitabine/nab-paclitaxel; NAT, neoadjuvant therapy; SUV, standardized uptake value.

**eTable 2. Univariate RFS and OS Models**

Variable	Univariate RFS Analysis		Univariate OS Analysis	
	HR (95% CI)	P Value	HR (95% CI)	P Value
Sex, female	0.7 (0.44–1.08)	.11	0.88 (0.50–1.56)	.67
Age at surgery, y	1.01 (0.99–1.04)	.36	1.02 (0.99–1.05)	.31
Age at surgery, y	1.23 (0.8–1.9)	.35	1.22 (0.69–2.13)	.5
CA 19-9 at diagnosis >500 U/mL	1.4 (0.88–2.17)	.15	1.23 (0.68–2.21)	.49
CA 19-9 at diagnosis >1,000 U/mL	1.52 (0.91–2.45)	.11	1.38 (0.73–2.60)	.32
CA 19-9 elevated at diagnosis	1.29 (0.74–2.24)	.38	1.02 (0.50–2.08)	.96
Optimal CA 19-9 level	0.47 (0.3–0.73)	<b>&lt;.001</b>	0.75 (0.43–1.32)	.32
Major CA 19-9 response <sup>a</sup>	0.38 (0.22–0.65)	<b>&lt;.001</b>	0.70 (0.35–1.41)	.32
Chemoradiation	0.56 (0.29–1.2)	.13	0.36 (0.15–0.84)	<b>.02</b>
Neoadjuvant therapy duration, mo	1.04 (0.99–1.09)	.13	0.99 (0.92–1.07)	.86
Major metabolic (PET) response	0.32 (0.2–0.51)	<b>&lt;.001</b>	0.25 (0.13–0.48)	<b>&lt;.001</b>
Vascular resection	1.28 (0.8–2.16)	.32	1.19 (0.63–2.24)	.56
Positive margin	2.25 (0.55–6.08)	.22	1.53 (0.37–6.33)	.56
Positive lymph nodes	1.29 (0.75–2.12)	.34	1.2 (0.63–2.28)	.58
Lymphovascular invasion	2.13 (1.16–3.65)	<b>.02</b>	1.08 (0.46–2.55)	.86
Perineural invasion	2.41 (1.56–3.74)	<b>&lt;.001</b>	2.11 (1.20–3.71)	<b>.009</b>
Major pathologic response	0.27 (0.15–0.45)	<b>&lt;.001</b>	0.37 (0.19–0.72)	<b>.004</b>
Adjuvant chemotherapy	0.56 (0.22–1.19)	.14	0.43 (0.13–1.41)	.12

Bold values indicate statistically significant *P* values.

Abbreviations: HR, hazard ratio; OS, overall survival; RFS, recurrence-free survival.

<sup>a</sup>Included only those with initial CA 19-9 elevation.