Neoadjuvant Treatment for Borderline-Resectable Pancreatic Cancer improves overall survival and surrogate prognostic markers: Systematic Review and Meta-analysis

PRESENTER:
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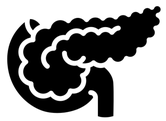
BACKGROUND: Pancreatic cancer is an oncological challenge. Neoadjuvant treatment may provide benefit:

1. Delineation of tumour biology and responsiveness
2. Improved systemic therapy rates
3. Downstaging of tumour

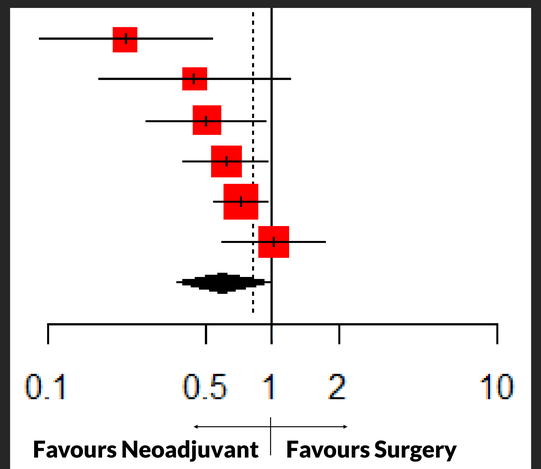
AIM: Evaluate the outcomes of patients with borderline and resectable PDAC in randomised controlled trials of neoadjuvant therapy vs. immediate surgery using intention to treat analysis

RESULTS

- Nine trials, 1,194 patients
- Improved overall survival for borderline-resectable disease (23.2 vs. 15.4 months, HR 0.60, 95% CI 0.38-0.96).
- The survival improvement was non-significant in those with resectable disease (25.2 vs. 22.9 months, HR 0.97, 95% CI 0.66-1.45).
- Disease free survival was improved but non-significant (11.3 vs. 7.8 months, HR 0.81, 95% CI 0.63-1.04, p=0.084).*
- Resection rate was higher in up front surgery
- R0 rate and N0 rate were improved with neoadjuvant therapy
- Complications were comparable
- SAEs were more frequent in neoadjuvant cohort



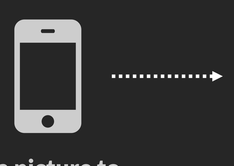
Borderline Resectable Pancreatic cancer should be treated with neoadjuvant therapy to improve survival and prognostic markers



Overall Survival (BR-PDAC) HR: 0.60 (0.38 – 0.96)

Resection Rate	**OR 0.65 (0.55-0.76)**
R0 Rate	**OR 1.79 (1.37-2.35)**
N0 Rate	**OR 2.68 (1.73-4.17)**

Prognostic Markers



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BACKGROUND:

- 4 including borderline resectable, 4 resectable, 1 both
- 4 chemotherapy, 4 radiotherapy, 1 both
- Follow up ranged from 12months to 5 years
- Trials included:
  - **ESPAC5** (Ghaneh, 2023) – BRPDAC, CT & CRT
  - **NORPACT1** (Labori, 2023) – R-PDAC, CT
  - **NeoNAX** (Seufferlein, 2023) R-PDAC, CT
  - **PREOPANC** (Versteijne, 2022) – BR- & R-PDAC, CRT
  - **JSAP-05** (Unno, 2019) BR-PDAC, CT
  - **PACT 15** (Reni, 2018) BR-PDAC, CRT
  - **Jang** et al (2018) BR-PDAC, CRT
  - Early RTCs (**Golcher** and **Casadei**, 2015) R-PDAC, CRT (both)

mOS (months, n=9)	Neoadjuvant	Surgery	HR (95%CI)
Overall	25.3	19.1	0.82 (0.59-1.15)
Borderline Resectable	23.2	15.4	0.60 (0.38-0.96)
Resectable	25.2	22.9	1.14 (0.79-1.63)
Chemotherapy	31.4	23.2	0.90 (0.42-1.94)
Chemoradiotherapy	19.1	14.2	0.76 (0.56-1.04)
mDFS (months, n=6)	**Neoadjuvant**	**Surgery**	**HR (95%CI)**
Overall	11.3	7.8	0.79 (0.58-1.06)
Borderline Resectable	9.0	8.8	0.75 (0.43-1.31)
Resectable	11.6	7.3	0.81 (0.41-1.56)
Chemotherapy	14.2	7.7	0.70 (0.41-1.17)
Chemoradiotherapy	8.4	8.1	0.87 (0.67-1.04)
Secondary Marker (pooled analysis)	**Neoadjuvant**	**Surgery**	**OR (95%CI)**
Resection Rate	67.1%	78.3%	0.65 (0.55-0.76)
R0 Rate	41.0%	31.4%	1.79 (1.37-2.35)
N0 Rate	33.0%	15.5%	2.68 (1.73-4.17)
Complication Rate (Clavien Dindo >3)	41.3%	38.9%	0.89 (0.38-2.06)
Significant Adverse Effects	45.2%	22.8%	3.33 (1.76 – 6.28)
Adjuvant Therapy Rate	47.3%	56.4%	0.77 (0.47-1.26)

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