

Prognostic value of the CRM-status in pancreatic ductal adenocarcinoma - data from a regional cancer registry.

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Background

Pancreatic ductal adenocarcinoma (PDAC) is still associated with a poor prognosis, even if resectable.

A tumour free resection margin (**Ro**) is more favourable than the presence of tumour cells at resection margin (**R1**). In order to more accurately determine the definition of Ro, the concept of **circumferential resection margin (CRM)** has been established and incorporated into the German national S3 guideline on exocrine pancreatic cancer (1). However, to date there is no international standardized definition of CRM and the clinical value is not yet unanimously confirmed (2).

Using data from a cancer database, we evaluate **whether the CRM status** as defined in the German national S3 guideline **corresponds with overall survival (OS) and progression free survival (PFS)** in PDAC.

Methods

We analysed data from the **cancer registry of the State of Baden-Württemberg**, acquired between 2015 and 2020. According to the Cancer Registry Act of the State of Baden-Württemberg data are only entered into the registry when patients have provided informed consent.

Data from patients fulfilling the given inclusion and exclusion criteria were evaluated in retrospect in our analysis.

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> >17 years histologically proven PDAC pancreatic tumour resection complete pathology report including R-status and CRM-status according to German S3 guideline 	<ul style="list-style-type: none"> metastatic disease neoadjuvant therapy death within 30 days after diagnosis

Table 1: Inclusion and exclusion criteria

We aimed at assessing the relationship between CRM-status and PFS as well as 3-year-OS in histologically proven PDAC. The definition of resection status was based on the German national S3 guideline (1).

R0 wide/CRM -	CRM is > 1 mm from tumour cells
R0 narrow/CRM +	CRM is ≤ 1 mm from tumour cells
R1	tumour cells present at resection margin

Table 2: Definitions of resection status according to the (1)

Results

	All	Ro wide/ CRM -	Ro narrow/ CRM +	R1
n (%)	1098 (100)	340 (31)	410 (37)	348 (32)
Patient age, median (SD)	71 (10.1)	72 (9.9)	70 (10.5)	72 (9.8)
Patient sex				
- Male (%)	542 (49,4)	165 (48,5)	207 (50,5)	170 (48,9)
- Female (%)	556 (50,6)	175 (51,5)	203 (49,5)	178 (51,1)

Table 3: Patient characteristics

Relationship between CRM-status and OS

3-year-OS was significantly different between the groups:

Ro wide/CRM -:	51,5 % (95 % CI 46.3-57.2 %)
Ro narrow/CRM +:	37,4 % (95 % CI 32.8-72.7 %)
R1:	26,7 % (95 % CI 22.3-32 %)

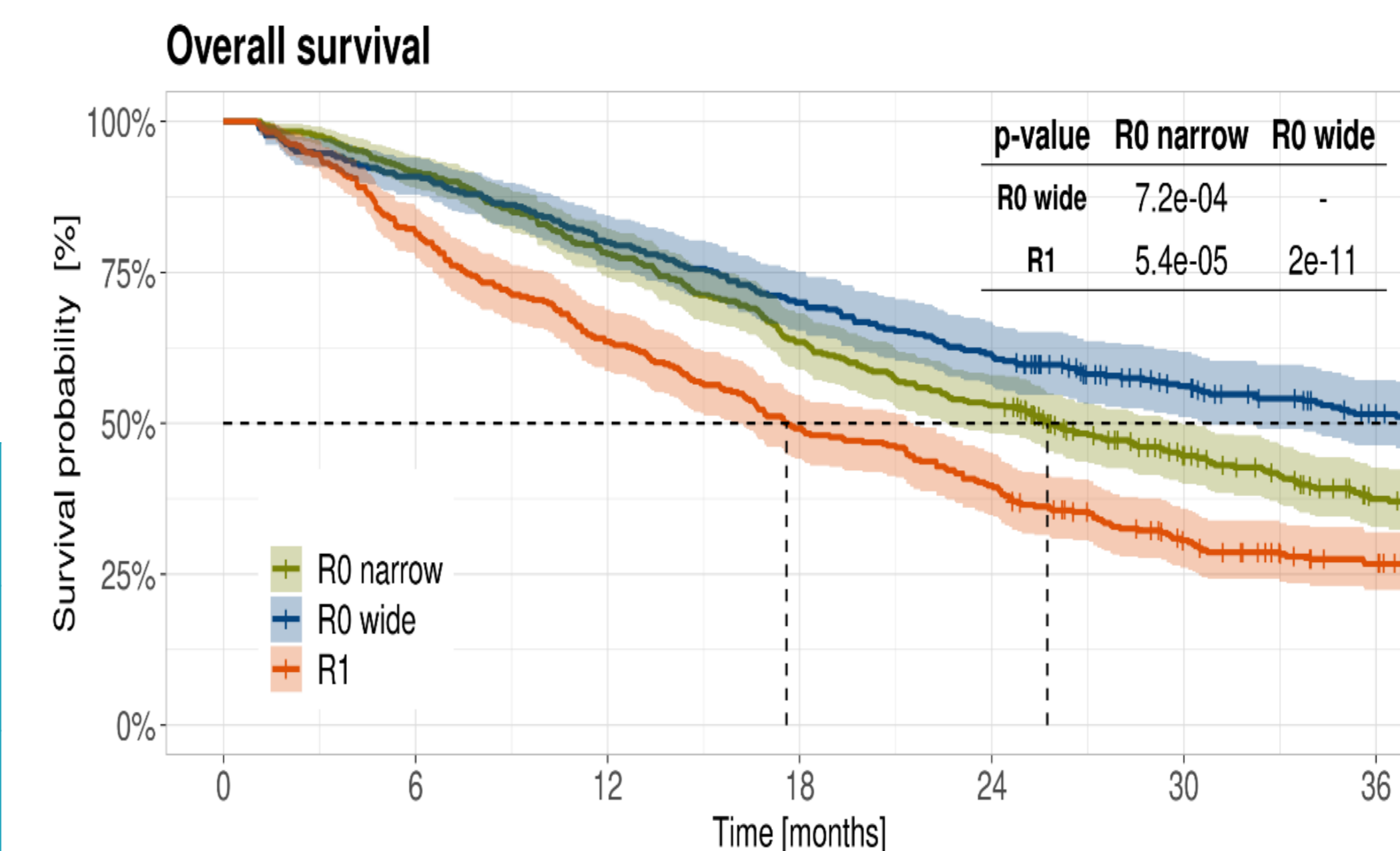


Figure 1: 3-year-OS in Ro wide/CRM-, Ro narrow/CRM+ and R1 resection

Relationship between CRM-status and PFS

PFS was significantly different between the groups:

Ro wide/CRM -:	32,3 m (95 % CI 24.4-44.3 m)
Ro narrow/CRM +:	19.1 m (95 % CI 16.3-22.8 m)
R1:	14.1 m (95 % CI 12.2-16.3 m)

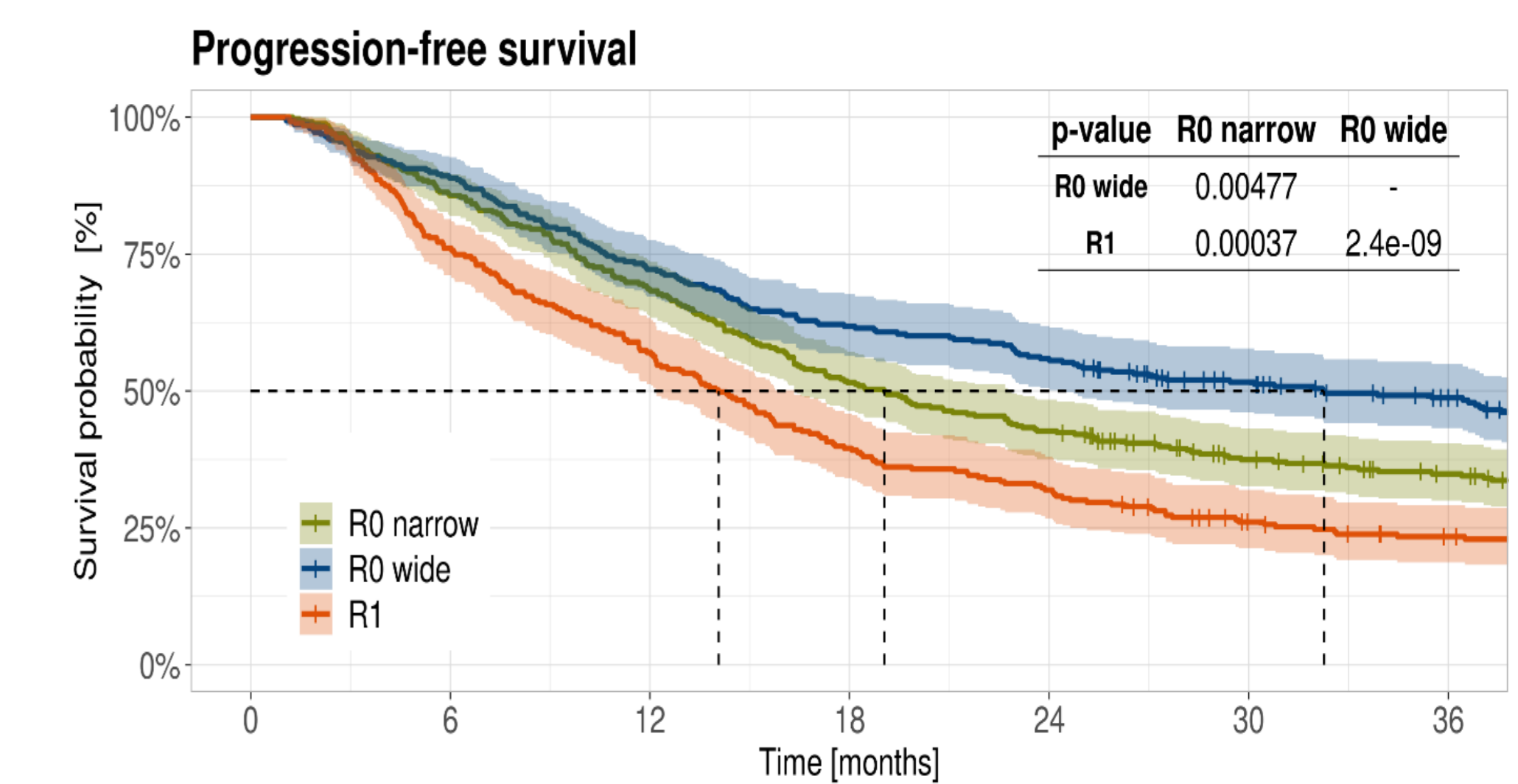


Figure 2: PFS in Ro wide/CRM-, Ro narrow/CRM+ and R1 resection

Conclusion

In PDAC, the resection status significantly correlates with PFS and OS. Both PFS and OS are significantly longer in Ro wide/CRM- than in Ro narrow/CRM+ and R1 resection, respectively. Therefore, we conclude that the precise assessment of the resection margin **has indeed prognostic value** in PDAC and should be considered in pathological evaluation henceforward.

References

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