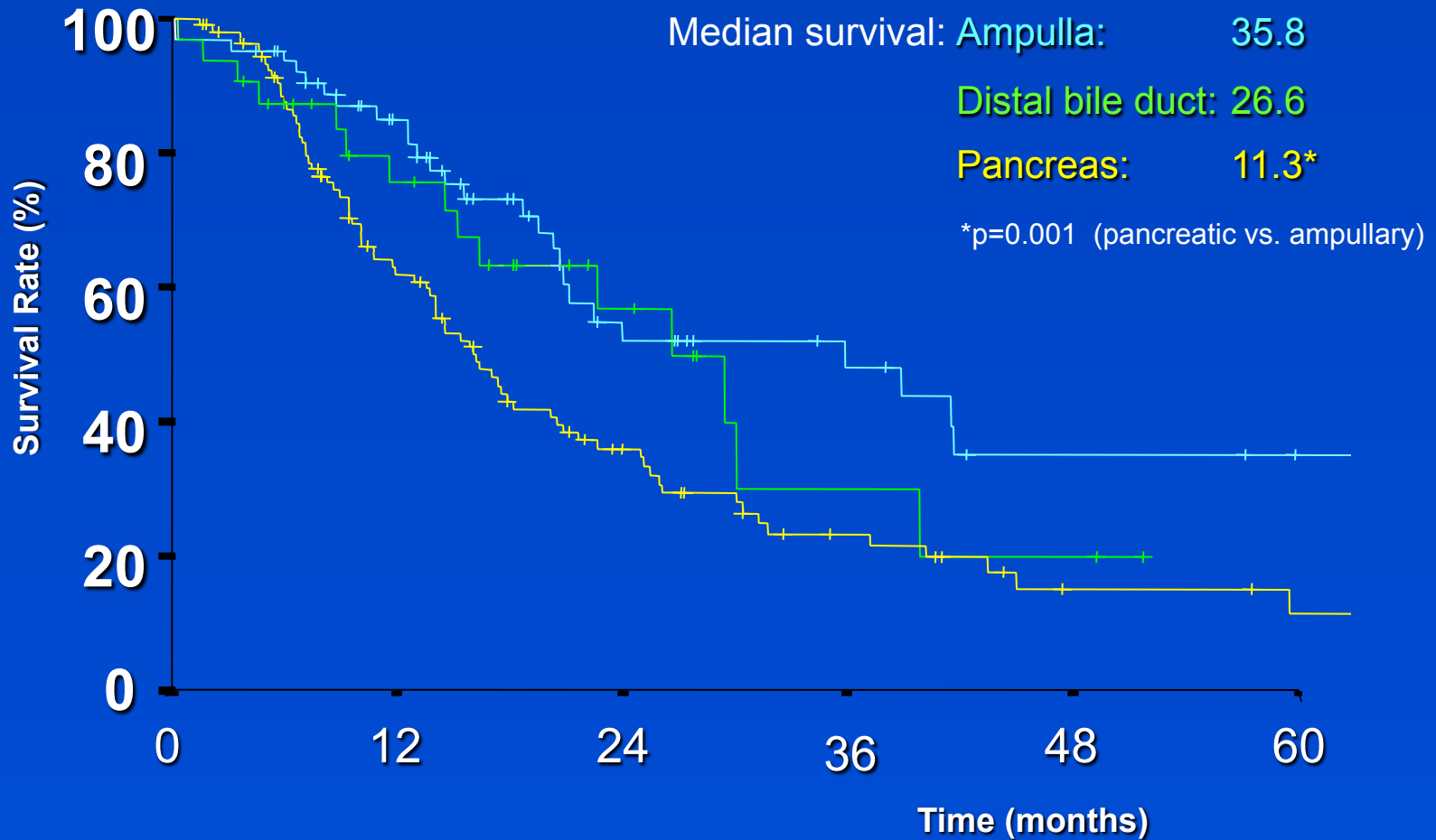


Pancreatic carcinoma, distal cholangiocarcinoma, and periampullary carcinoma

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Survival after PPPD

Tumour site (univariate analysis)



Periampullary tumors

- Detection
- Staging
- Resectability
- Vascular ingrowth
- Borderline tumors

Pancreatic adenocarcinoma

Hypovascular tumors

Low density on CT

Little or no enhancement

Ductal obstruction

Typical short-distance DP caliber change

Homogeneous

TNM Staging

- T1,T2
 - Confined to pancreas
 - T1 <2 cm; better prognosis
 - T2 >2 cm
- Same treatment

TNM Staging

- T in situ
- Endo US for local resection

TNM Staging

- T3
 - Outside pancreas
 - Other adjacent organs (duodenum, spleen)
- T4
 - Ingrowth celiac trunc, sma

Stadierung TNM

- N stage
 - What are locoregional nodes?
 - What are distant nodes ?

Positive nodes

Regional

Distant

peripancreatic

Coel trunc

porto-caval
a. hep

para-aortal

CBD

along SMV
Right side AMS

mesenterial

Local resectability vascular ingrowth \neq irresectability

- No venous resection
- Sleeve resection
- Venous resection with reconstruction
 - when vein is patent
 - when occlusion is short

Surgical decision

Local irresectability: involvement PV, SMV

- Occlusion
- Thrombus
- >180 degr (encasement)
- Narrowed, irregular
- Teardrop

Meta analysis PV-SMV resection

- Meta analysis 2006
- Morbidity 9-78 %
- Mortality 5.9 % (73/1235)
- Survival 1,3,5 yr 50%,16%, 7%

Br j surg 2006 jun

- Meta analysis 2011 (periode 2000-2009)
- Morbidity 33% (6-67%)
- Mortality 3,5 % mediaan (0-14%)
- Survival 1,3,5y 56%, 17%,12%

Hepatogastroenterology. 2011 Mar-Apr;58(106):623-31.

Conclusion: Feasible in selected pts

SMA

- >180 : ingrowth

$< 180^\circ$: high chance of irresectability

Survival multivariate analysis relative hazard

Variable	relative hazard for survival (exp (B))	p value
SM Artery encased	4.71	0.027
Tumorconvexity B or larger	3.22	0.011
Tumor > 3 cm	2.08	0.022
Male gender	1.53	0.164
Age < 62 years	1.51	0.142

Conclusions staging:

- SMV/PV:
 - encased >180, thrombus, occlusion, narrowing
 - irregular, teardrop

= vascular ingrowth, sometimes wedge resection possible

- SMA:
 - >180

= irresectable

 - 90-180
 - > 80% vascular ingrowth, bad prognosis

Borderline tumors?

	resectable	borderline	Irresectable
PV/SMV	< 90	90-270	270-360
			teardrop
			thrombus
			occlusion
			stenosis
SMA	Free	< 90	> 90

Study

neoadjuvant chemoradiotherapy

Locally advanced pancreas carcinoma

Direct resection:

- Venous $< 90^\circ$, no art involvement

Primary Irresectable:

- Venous $> 270^\circ$
- Artery $> 90^\circ$
 - SMA, HA, Co Tr

Study

neoadjuvant chemoradiotherapy

Locally advanced pancreas carcinoma:

Borderline: neoadjuvant Rth/Chemoth

Venous: 90 - 270

Art < 90

- (sma, ha, tr .coel)