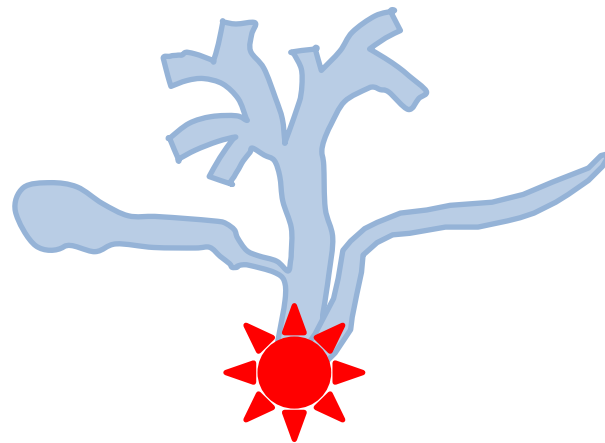
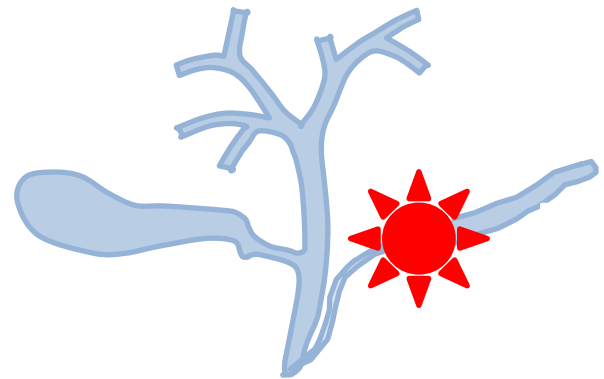
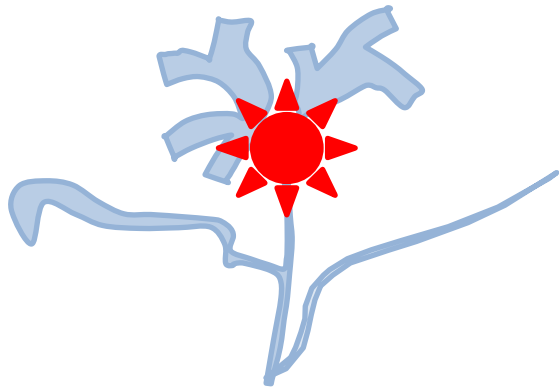


Updates – Neues aus dem letzten Jahr

Biliopankreatische Stenosen

Gernot W. Wolkersdörfer

Universitätsklinik für Innere Medizin I,
Paracelsus Medizinische Privatuniversität
Salzburg



A) Papille



Clinical usefulness of double-guidewire technique for difficult biliary cannulation in ERCP

Ito K et al. Dig Endosc. 2013 Aug 12.

single-guidewire technique:	success 70%	PEP in 8%
25 pat. double-guidewire technique:	success 72%	PEP in 4%
13 pat. precut: success in 46%		PEP in 0%

Double-guidewire superior, failed PD stent associated with PEP.

Wire-guided biliary cannulation does not reduce the risk of PEP: multicenter randomized controlled trial

Kobayashi G et al. Dig Endosc. 2013 May;25(3):295-302

163 pat. wire-guided cannulation	success 83%	PEP in 6.1%
159 pat. conventional cannulation	success 87%	PEP in 6.3%

-does not reduce the risk of PEP, does not improve success rate.

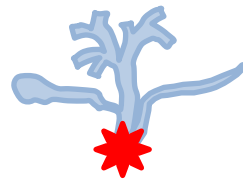
Guide wire-assisted cannulation for the prevention of post-ERCP pancreatitis: a systematic review and meta-analysis.

Tse F et al. Endoscopy. 2013 Aug;45(8):605-18

12 RCTs (3450 patients)

-increases the primary cannulation rate and reduces the risk of PEP

A) Papille



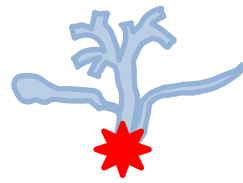
Double guidewire technique vs transpancreatic precut sphincterotomy in difficult biliary cannulation.

Yoo YW et al. World J Gastroenterol. 2013 Jan 7;19(1):108-14.

34 pat. double-guidewire technique:	success 91.2%	PEP 38.2%
37 pat. transpancreatic precut:	success 91.9%	PEP 10.8%

DGT and TPS facilitated cannulation , PEP significantly higher in DGT

A) Papille



New role of the dual knife for precut papillotomy in difficult bile duct cannulation.

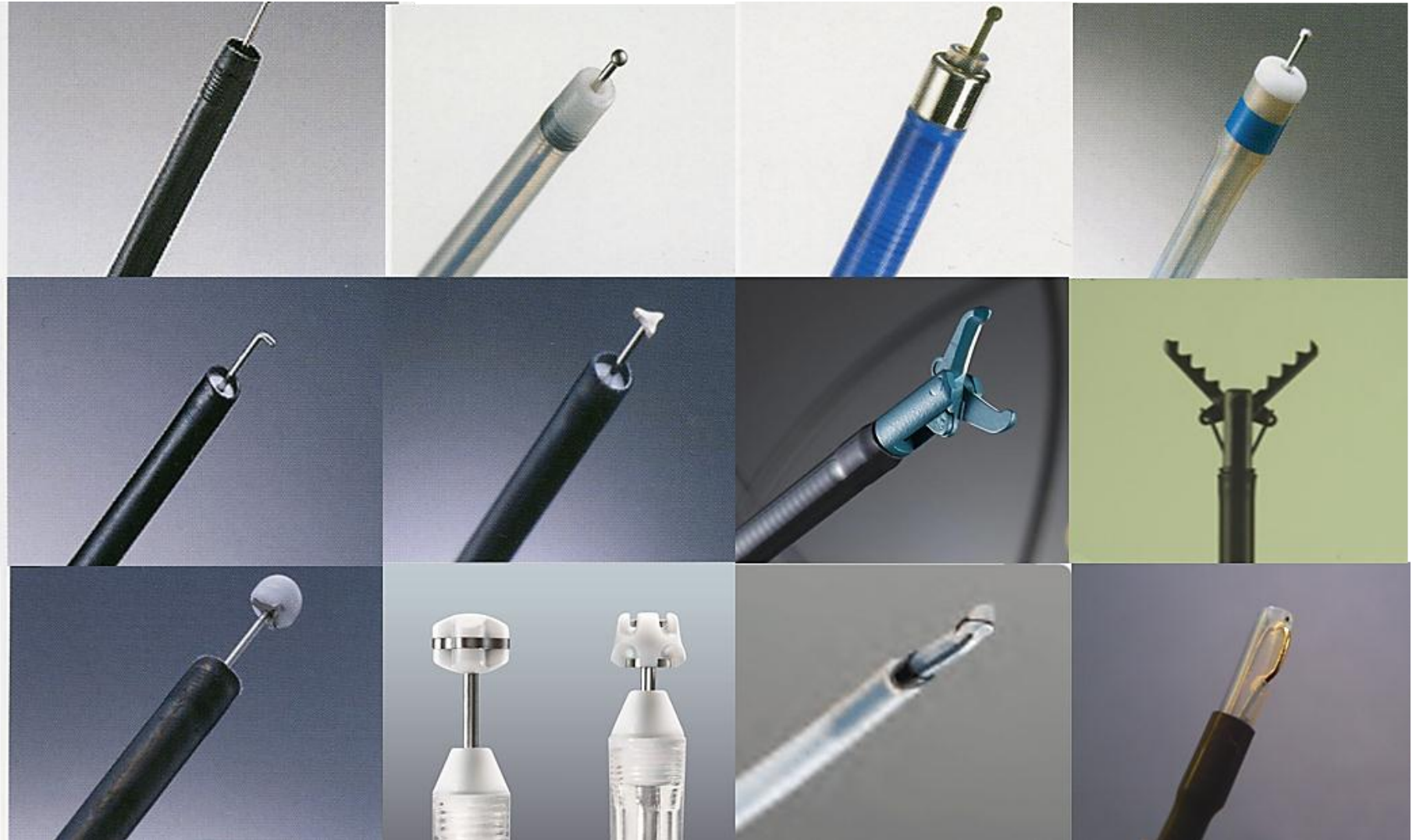
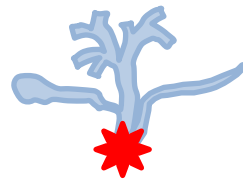
Liu F et al. Dig Endosc. 2013 May;25(3):329-32

18 patients

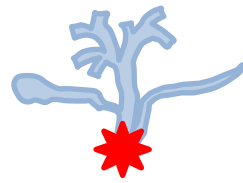
success 100%

PEP in 1

A) Papille



A) Papille



Needle knife precut papillotomy and fistulotomy for difficult biliary cannulation during ERCP

Zhang QS et al. Digestion. 2013;88(2):95-100

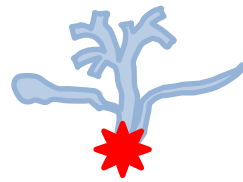
48 patients

success 96%

PEP in 4%

Effective method after failed standard cannulation, not associated with increased risk.

A) Papille



Telemedicine: an important aid to perform high-quality ERCP in low-volume centers.

Påhlsson HI et al. Endoscopy. 2013;45(5):357-61

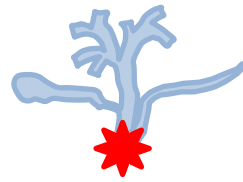
26 ERCP teleguided

overall success rate improved from 85 % to 99 %

Distant guidance improves the quality of care.



A) Papille



Telemedicine: an important aid to perform ERCP in low-volume centers.

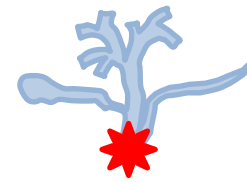
Påhlsson HI et al. Endoscopy. 2013;45(5):357-61

26 ERCP teleguided

Distant guidance improves the quality of care. overall success rate improved to 99 %

**Karolinska
Institutet
CLINTEC, Univ.
Hospital, Dept. of
Surgery and GE,
SE-141 86
Stockholm, Sweden**

A) Papille



Endosc. sphincterotomy plus balloon dilation versus endoscopic sphincterotomy for choledocholithiasis: A meta-analysis.

Liu Y et al. J Gastroenterol Hepatol. 2013 Jun;28(6):937-45

3 random. controlled trials:	equivalent, but less bleeding
6 retrospective studies:	higher initial success, less lithotripsy , fewer complications

Feasible, without increased risk, causing less bleeding.

Large balloon dilation of recurrent bile duct stones prevents short-term recurrence in pat. with previous end. sphincterotomy.

Harada R et al. J Hepatobiliary Pancreat Sci. 2013 Jun;20(5):498-503

32 patients without LBD; 32 patients with LBD

LBD reduces the short-term recurrence of CBD stones significantly .

A) Papille



Meta-analysis comparison of endosc. papillary balloon dilatation and endosc. sphincter papillotomy.

Zhao HC et al. World J Gastroenterol. 2013 Jun 28;19(24):3883-91

980 patients balloon dilatation

PEP 4.45%

995 patients sphincter papillotomy

PEP 1.74%

Incidence of pancreatitis higher, overall stone clearance rate and risk of bleeding was lower with EPBD compared to EST.

Papillary balloon dilation is not itself a cause of post-ERCP pancreatitis; results of antero- & retrograde papillary balloon dilation.

Seo YR et al. J Gastroenterol Hepatol. 2013 Aug;28(8):1416-21

56 patients antegrade dilatation

success 98.2%

PEP in 0

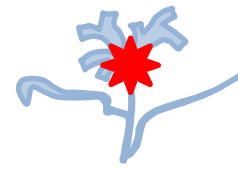
208 patients retrograde dilation

success 97.1%

PEP 6.7%

Mechanism unclear, associated with procedures before and after balloon dilation.

C) Gallenwege



Fever-based antibiotic therapy for acute cholangitis following successful endoscopic biliary drainage.

Kogure H., et al. J Gastroenterol 46(12) 1411-7 (2011).

Spontaneous passage of common bile duct stones in jaundiced patients.

Lefemine V. und R.J. Morgan. Hepatobiliary Pancreat Dis Int 10(2) 209-13 (2011).

Ikerus resolved in 76 patients spontaneously

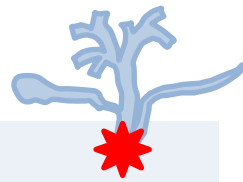
60 patients were free of stones

Management for CBD stone-related mild to moderate acute cholangitis: urgent versus elective ERCP.

Jang SE et al. Dig Dis Sci. 2013 Jul;58(7):2082-7.

urgent ERCP recommended in CBD stone-related mild to moderate acute cholangitis because of short hospital stay

A) Papille



Meta-analysis: rectal indomethacin for the prevention PEP.

Yaghoobi M et al. Aliment Pharmacol Ther. 2013 Nov;38(9):995-1001

4 of 61 retrieved trials between 2007 and 2012 (n = 1470)

indomethacin sign. reduces the risk of PEP to half in both low- and high-risk patients, and with stat. and clin. significant conclusions.

A) Papille



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Pharmacologic prophylaxis of PEP: protease inhibitors and NSAIDs in a meta-analysis.

Yuhara H et al. J Gastroenterol. 2013 May 30.

26 trials, nafamostat mesilate, gabexate mesilate and ulinastatin

nafamostat mesilate and NSAIDs prevent PEP

A) Papille



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Glyceryl trinitrate for prevention of PEP and improve the rate of cannulation: a meta-analysis of prosp., rand., controlled trials.

Ding J et al. PLoS One. 2013 Oct 1;8(10):e75645.

12 RCTs involving 2649 patients

GTN reduced the overall incidence of PEP& hyperamylasemia.

GTN not helpful for severity of PEP & the rate of cannulation.

A) Papille



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Aggressive Hydration With Lactated Ringer's Solution Reduces PEP.

Buxbaum J et al. Clin Gastroenterol Hepatol. 2013 Aug 3.

39 % 23 patients

pilot study, aggressive iv hydration appears to reduce the PEP.

A) Papille



Meta-analysis: rectal indomethacin for the prevention PEP.

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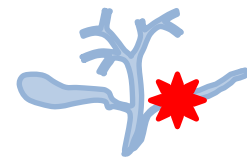
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B) Pankreas



Role of (18)F-FDG PET/CT in diagnosis and management of pancreatic cancer; comparison with Multidetector CT, MRI & EUS.

Ergul N *et al.* Rev Esp Med Nucl Imagen Mol. 2013 Oct 16

52 patients pancreatic ductal adenocarcinoma

14 patients focal mass-forming chronic or autoimmune pancreatitis

FDG PET/CT is valuable, especially when applied along with EUS.

18-Fluorodeoxyglucose positron emission tomography does not aid in diagnosis of pancreatic ductal adenocarcinoma.

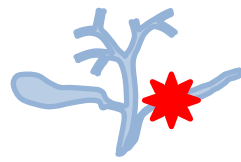
Matsumoto I *et al.* Clin Gastroenterol Hepatol. 2013 Jun;11(6):712-8

218 patients pancreatic ductal adenocarcinoma

14 patients focal mass-forming chronic or autoimmune pancreatitis

FDG-PET not effective in detecting early stage PDA and small metastases, or in differentiating PDA from FMP. Combining with other techniques did not provide any decisive information.

B) Pankreas



The differentiation of autoimmune pancreatitis and pancreatic cancer using imaging findings.

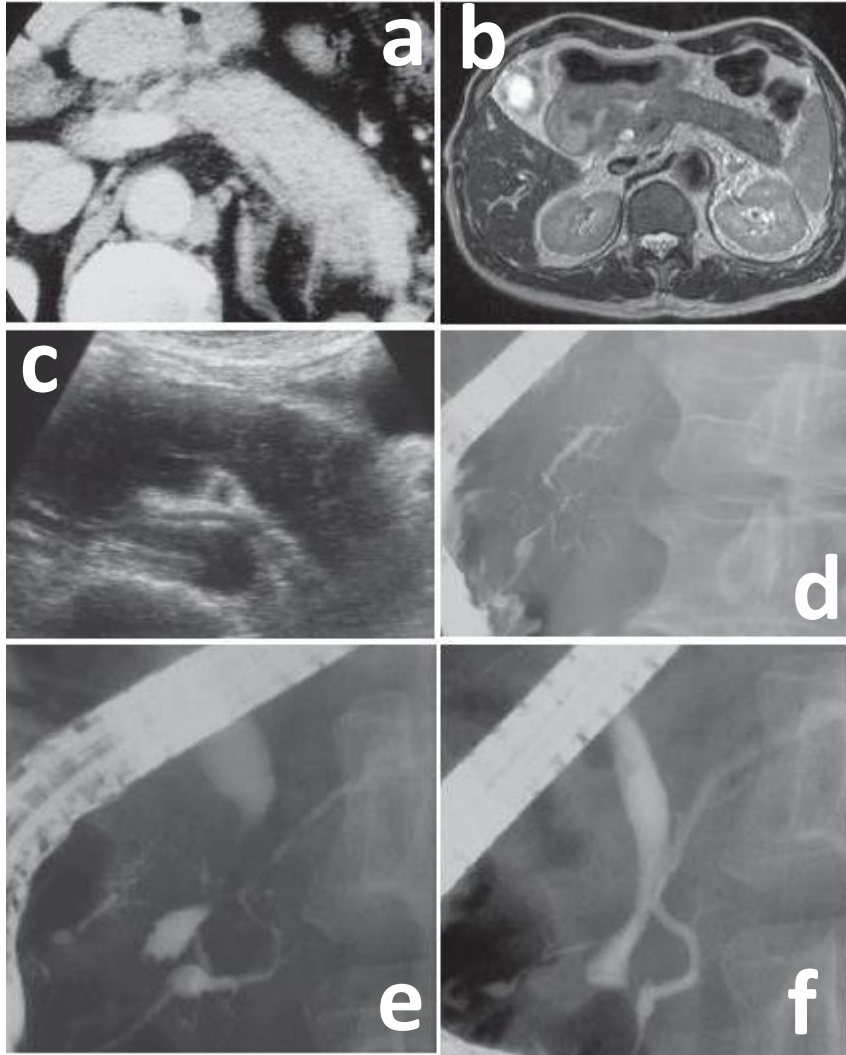
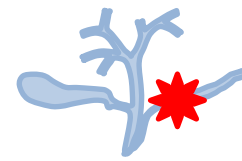
Shin JU et al. Hepatogastroenterology. 2013 Jul-Aug;60(125):1174-81

CT/MRI: diffuse enlargement, capsule-like rim and delayed homogenous enhancement

ERCP: main duct narrowing by $\geq 1/3$ of length, skipped lesions, the presence of side branches at the narrowed portion, and smooth and straight intrapancreatic common bile duct stenosis

FDG-PET: not significantly different

B) Pankreas



a **diffuse enlargement** of the pancreas showing **delayed enhancement** on CT scan.

b hypointense **capsule-like rim** surrounding the swollen pancreas on T2-weighted MRI.

c **diffuse hypoechoic swollen pancreas** with hyperechoic spots on US.

d **Diffuse irregular narrowing of the main pancreatic duct.**

e stenosis of the lower BD and segmental narrowing of the main PD. Upstream dilatation of the pancreatic duct is less noted than with pancreatic cancer.

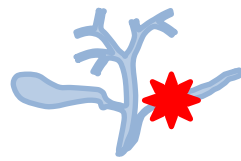
f after steroid therapy

Autoimmune pancreatitis: proposal of IgG4-related sclerosing disease.

T. Kamisawa and A. Okamoto

Journal of Gastroenterology© Springer-Verlag Tokyo 2006, 10.1007/s00535-006-1862-6

B) Pankreas



EUS elastography for differentiating between pancreatic adenocarcinoma and inflammatory masses: a meta-analysis.

Li X et al. World J Gastroenterol. 2013 Oct 7;19(37):6284-91

EUS elastography is a valuable method for the differential diagnosis between PDAC and PIM.

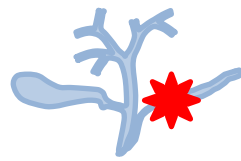
Clinical utility of endoscopic ultrasound elastography for identification of malignant pancreatic masses: a meta-analysis.

Ying L et al. J Gastroenterol Hepatol. 2013 Sep;28(9):1434-43

10 studies including 893 pancreatic masses (646 malignant, 72.3%)

good identification tool for benign and malignant pancreatic masses, with its good performance for exclusion of presence of malignant pancreatic masses.

B) Pankreas



Differential Diagnosis of Focal Non-Cystic Pancreatic Lesions With and Without Proximal Dilatation of Pancreatic Duct on CT Scan.

Tummala Md P et al. Clin Transl Gastroenterol. 2013 Nov 7;4:e42.

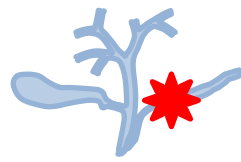
445 non-jaundiced patients

neoplasm in 152 of 187 patients with PD dilatation

87 of 258 patients without PD dilatation

Dilatation PD proximal to a focal solid pancreatic lesion increases the likelihood of malignancy.

B) Pankreas



Role of endoscopic ultrasonography in patients with first episode of idiopathic acute pancreatitis.

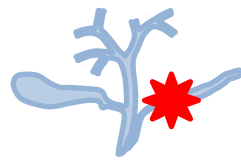
Govil A et al. Indian J Gastroenterol. 2013 Nov 17.

51 patients

56.9 % patients with EUS findings:
calculus, sludge and chronic pancreatitis

EUS is safe and has a reasonable diagnostic yield.

B) Pankreas



CEA in differentiating pancreatic cysts: a meta-analysis.

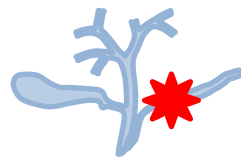
Ngamruengphong S et al. Dig Liver Dis. 2013 Nov;45(11):920-6

8 studies (504 patients)

109.9 to 6000 ng/mL

pooled sensitivity of 63%, pooled specificity of 63%

Accuracy in differentiating "between benign and malignant" poor.



International Consensus Diagnostic Criteria for Autoimmune Pancreatitis and Its Japanese Amendment Have Improved Diagnostic Ability over Existing Criteria

Maruyama M et al. Gastroenterology Research and Practice, 2013, Article ID 456965, 8 p.

ICDC achieved the highest diagnostic ability in terms of accuracy (95.0%), followed by JPS 2011 (92.9%), Korean (92.2%), HISORT (88.7%), Asian (87.2%), and JPS 2006 (85.1%).

B) Pankreas



TABLE 1: Comparison of 6 major diagnostic criteria systems for AIP.

	JPS-2006	Korean	Asian	HISORT		ICDC		JPS-2011	
(I) Imaging findings	Mandatory	Mandatory	Mandatory	Not mandatory		Not mandatory		Not mandatory	
				Typical	Atypical	Typical	Indeterminate	Typical	Indeterminate
(a) Parenchymal imaging	Swelling	Swelling	Swelling	Swelling	Focal mass/ calcification/ atrophy, etc.	Diffuse swelling	Segmental/ focal swelling	Diffuse swelling	Segmental/ focal swelling
(b) Ductal imaging	ERCP irregular narrowing	ERCP/MRCP irregular narrowing	ERCP irregular narrowing	Irregular narrowing	Focal duct stricture	Irregular narrowing		ERCP [‡] Irregular narrowing	
(II) Serology	γ -Globulin/ IgG/IgG4/ autoantibodies	IgG/IgG4/ autoantibodies	IgG/IgG4/ autoantibodies	IgG4		IgG4		IgG4	
(III) Histology	LPSP	LPSP/IgG4-positive plasma cells	LPSP/IgG4- positive plasma cells	LPSP/IgG4-positive plasma cells		LPSP/IgG4-positive plasma cells IDCP/GEL [†]		LPSP/IgG4-positive plasma cells	
(IV) Other organ involvement	Not included	Includes histological findings	Not included	Includes histological findings		Includes histological findings/ clinical findings [⊕]		Includes histological findings/ clinical findings	
(V) Response to steroid	Not included	Includes pancreatic lesion/ extrapancreatic lesions	Optional pancreatic lesion	Includes pancreatic lesion/ extra-pancreatic lesions		Includes pancreatic lesion/ extra-pancreatic lesions		Includes pancreatic lesion/ extra-pancreatic lesions	
Diagnosis	I + II I + III	I + II I + III I + IV I + V	I + II I + III	III I (typical) + II I (atypical) + II/IV + V		Shown in Table 3		Shown in Table 4	

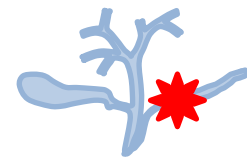
[‡]JPS-2011 requires evaluation by ERP in indeterminate imaging evidence.

[†]Diagnosis of type 2 AIP requires histologically confirmed IDCP/GEL.

[⊕]Findings in type 1 AIP are sclerosing cholangitis, retroperitoneal fibrosis, Mikulicz disease, and renal disease. Finding in type 2 AIP is inflammatory bowel disease.

ERCP: endoscopic retrograde pancreatocholangiography; LPSP: lymphoplasmacytic sclerosing pancreatitis; IDCP: idiopathic duct-centric chronic pancreatitis; GEL: granulocytic epithelial lesion.

B) Pankreas



Endoscopic stent therapy in patients with chronic pancreatitis: a 5-year follow-up study.

Weber A et al. World J Gastroenterol. 2013 Feb 7;19(5):715-20

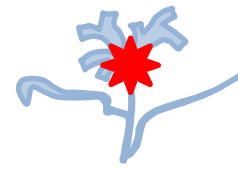
19 patients

initial success 17

no relapse in 57%

Endoscopic therapy should be the treatment of choice in patients being inoperable or refusing surgical treatment.

C) Gallenwege



Endoscopic plastic stenting for bile duct stones: stent changing on demand or every 3 months. A prospective comparison study.

Di Giorgio P et al. Endoscopy. 2013 Dec;45(12):1014-7

39 patients	stent exchange every 3 mo	1 cholangitis (1)
39 patients	changed on demand	14 cholangitis (3)

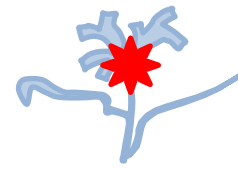
best to avoid cholangitis was exchange at defined intervals

Short-term biliary stenting before mechanical lithotripsy for difficult bile duct stones.

Sharma SS et al. Indian J Gastroenterol. 2013 Dec 6.

30 patients mechanical lithotripsy	time, success
39 patients , stenting , then mechanical lithotripsy	p < 0.001

Short-term (2 to 3 months) stenting should be done.



Feasibility of using wire-guided needle-knife electrocautery for refractory biliary and pancreatic strictures.

Gao DJ et al. J Gastrointest Endosc. 2013 May;77(5):752-8

279 patients

success rate increased from 95.7% to 98.9%

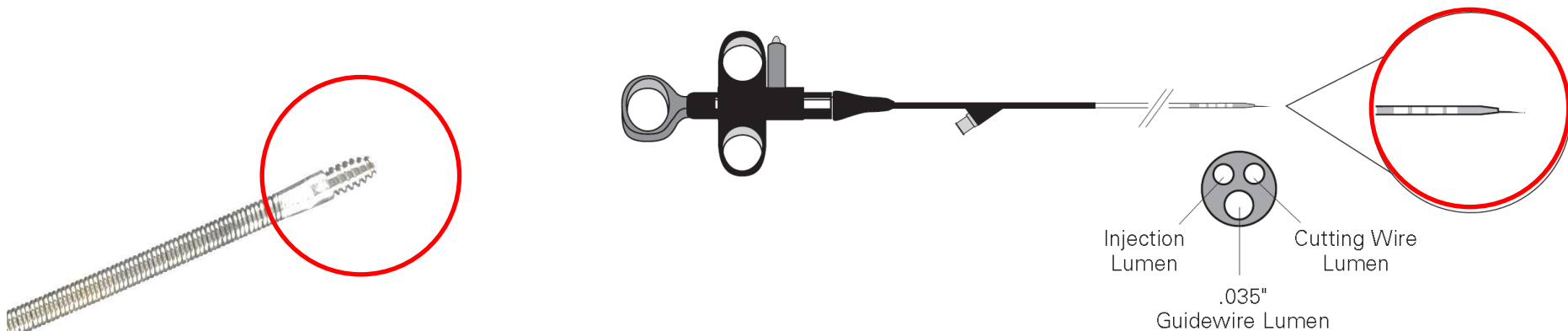
279 ERCP /dilators

22 Soehendra retriever

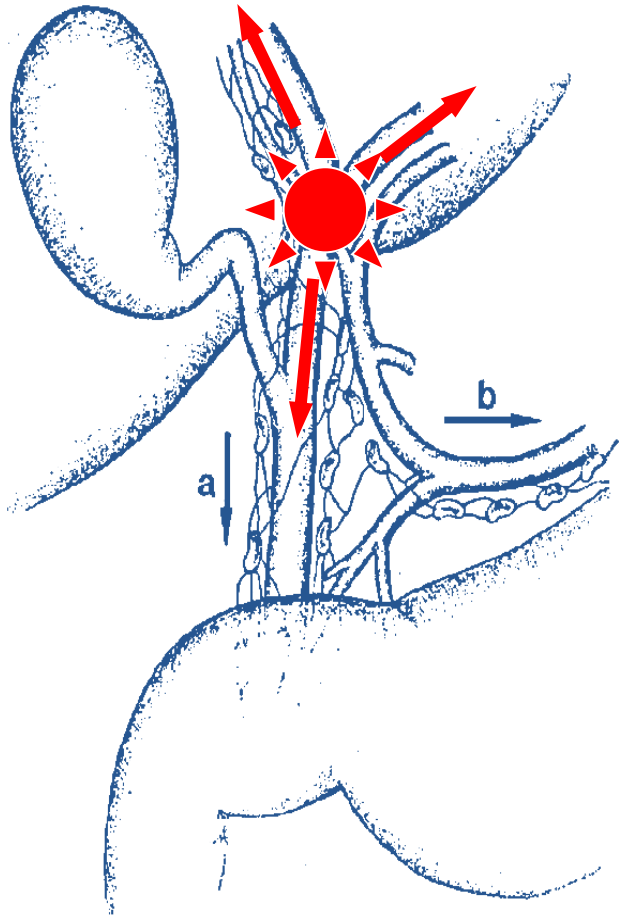
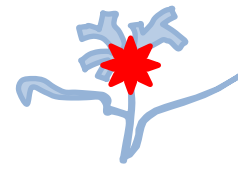
10 needle knife

1 PTCD (+2)

appears to be effective .



C) Gallenwege

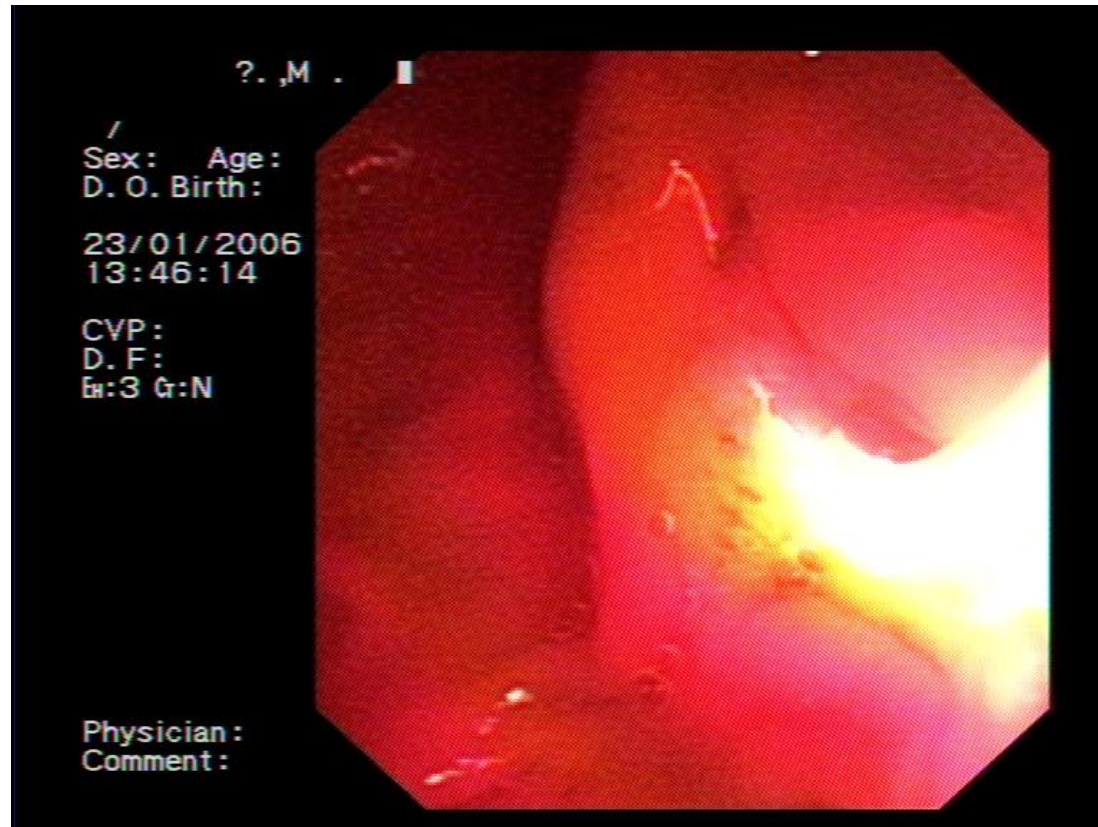
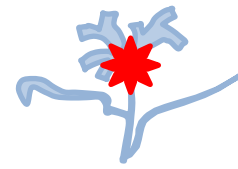


Inzidenz 3-4 / 100.000 x Jahr
medianes Alter 70-75 Jahre

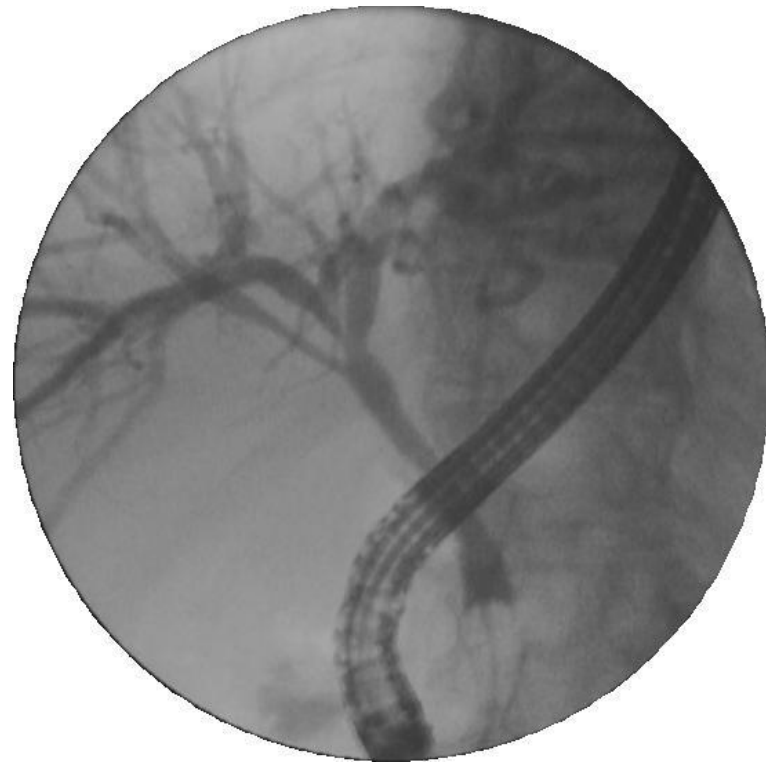
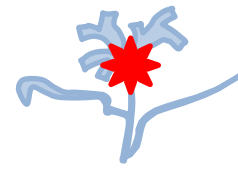
Progression \Rightarrow Cholestase, Sepsis

Palliative Therapien \Rightarrow ÜLZ
Effizienz gegen Tumorkomplikationen

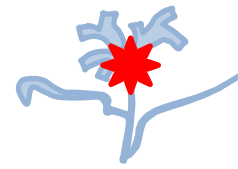
C) Gallenwege



C) Gallenwege



C) Gallenwege



Photodynamische Therapie - Nebenwirkungen



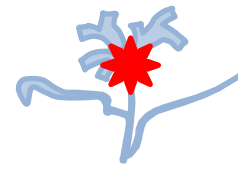
Porfimer



Temoporfin



C) Gallenwege

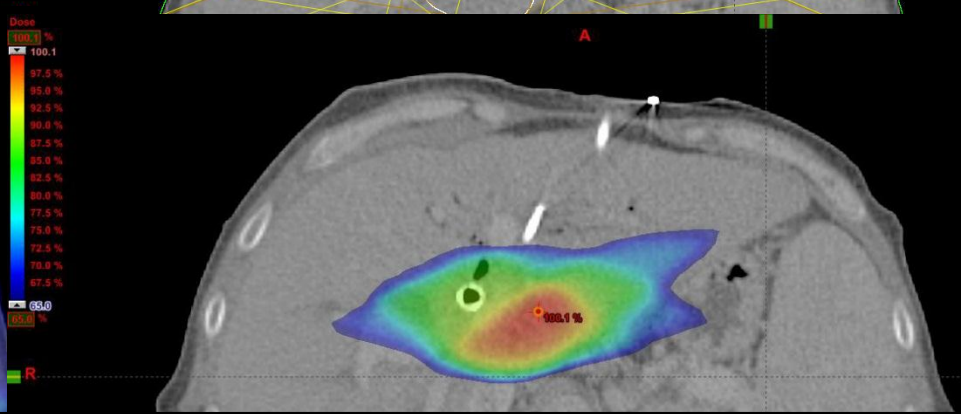
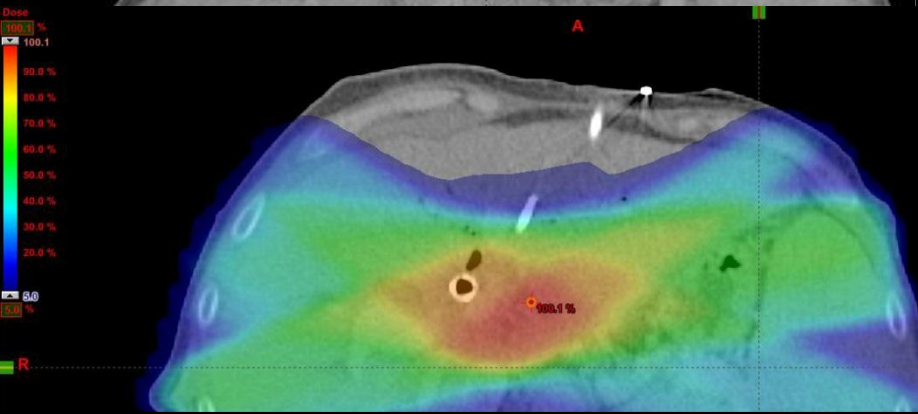
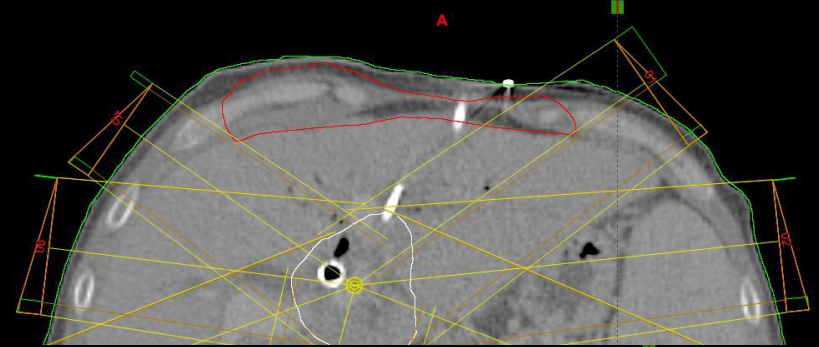
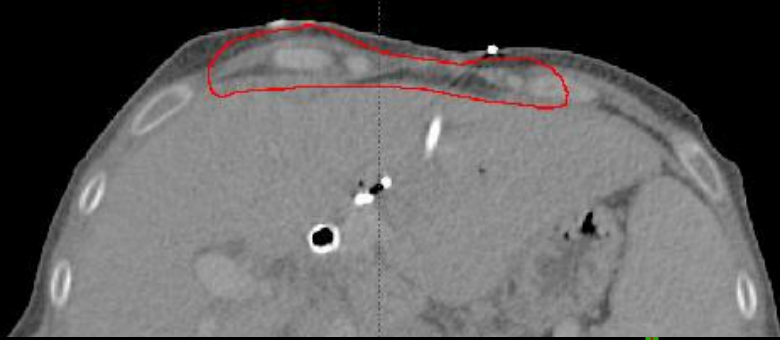


Komplikationen

Todesursachen

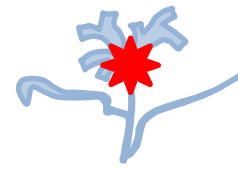
Chronische Cholangitis	20%	Tu-Progression	63%
Sepsis / Peritonitis	4%	Infektionen	25%
Gastrointestinale Blutung	11%	GI-Blutungen	5%
Sonnenbrand I / II	9/4%	Embolie/Herztod	8%

Berr F, Sem Liv Dis 2004

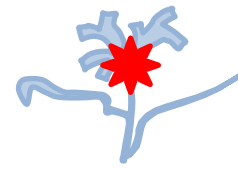


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C) Gallenwege



Therapieform	n	Mediane ÜLZ (Mo)	
		<small>Kontr.</small>	<small>Therap.</small>
Chemotherapie			
nichtresektabel, metastasiert, extrahepatisch hilär, ampulär oder Gallen-blasenkarzinome, intrahepatisch	815	8,60	11,1
Radiotherapie			
nichtresektabel, extrahepatisch hilär	85	9,9	23,1
Photodynam. Therapie			
nichtresektabel, extrahepatisch hilär	303	6	16,4
Operation			
nicht-kurativ resektabel	83	4,5	5,0

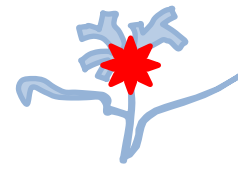


R0 but not R1/R2 resection is associated with better survival than palliative photodynamic therapy in biliary tract cancer.

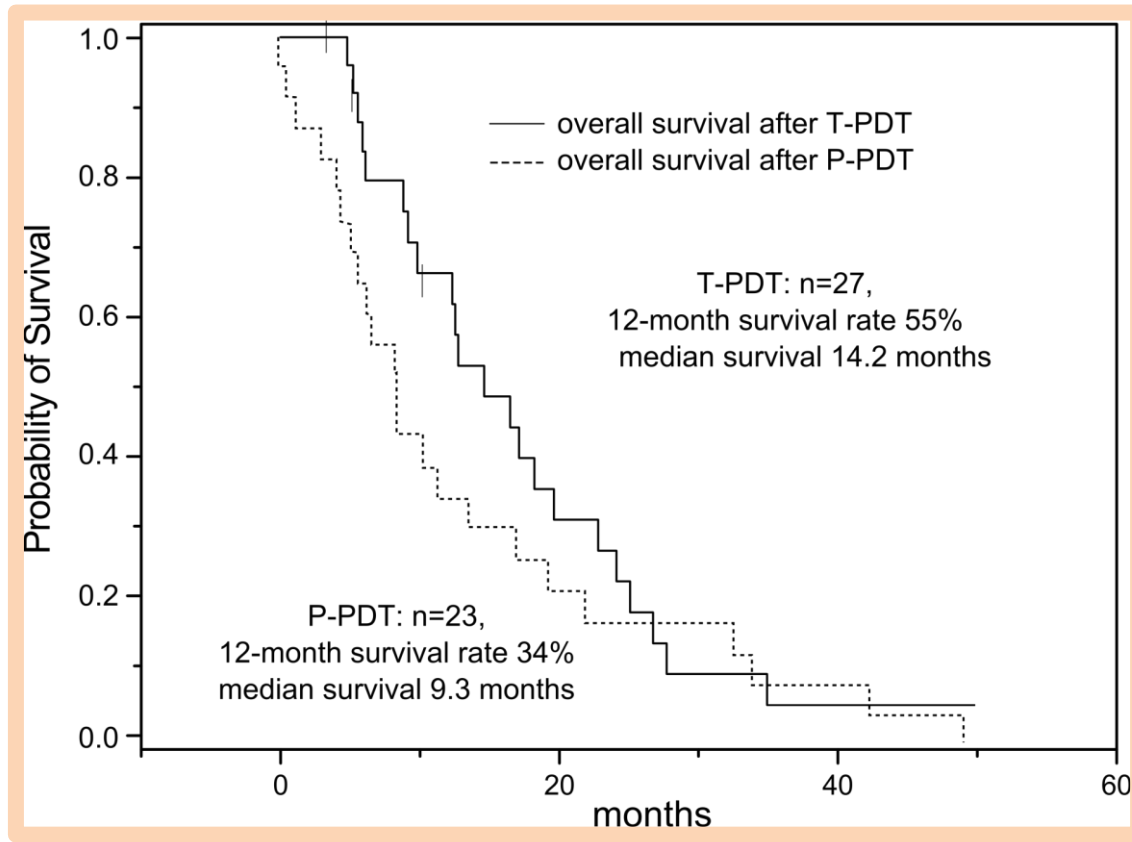
Matull WR et al. Liver Int. 2011 Jan;31(1):99-107

321 patients	28% surg.intervention /curative int.	19 mo (0-83)
	38% R0 resections.	
	34% chemo- and/or radiotherapy,	8 mo (1-49)
	14% PDT	12 (1-51)
	37% biliary drainage	3 (0-60)

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Safety and long term efficacy of temoporfin PDT in locally advanced biliary tract carcinoma: a multicenter prospective phase II study



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Danke für Ihre Aufmerksamkeit!