



8. Jahrestagung der Gesellschaft für
Gastroenterologie und Hepatologie in
Berlin und Brandenburg

Hauptthema:

**Gastroenterologie und
Hepatologie 2014**

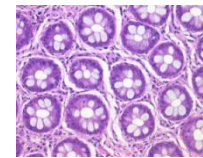
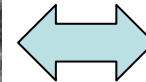
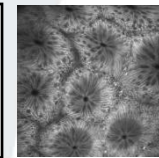
27. Endoskopietag
45. Lebertag
14. Onkologentag

5. Symposium
für Endoskopie-Assistenzpersonal

24. und 25. Januar 2014
im Langenbeck-Virchow-Haus, Berlin

Endomikroskopie 2014

Eine Bestandsaufnahme

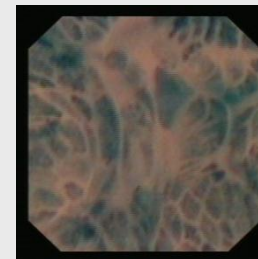
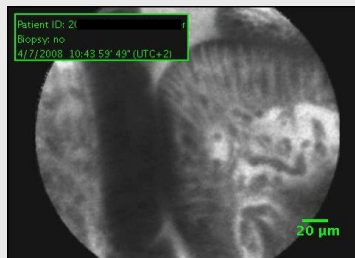
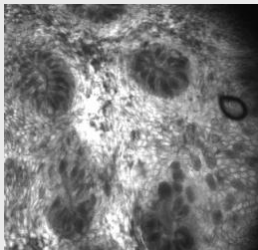
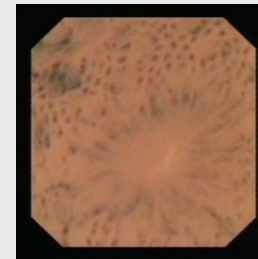
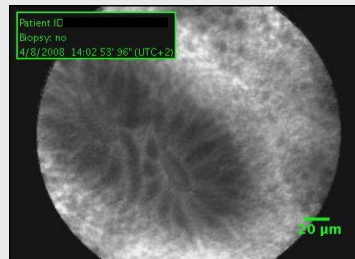
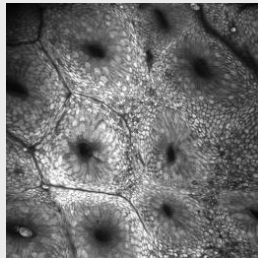
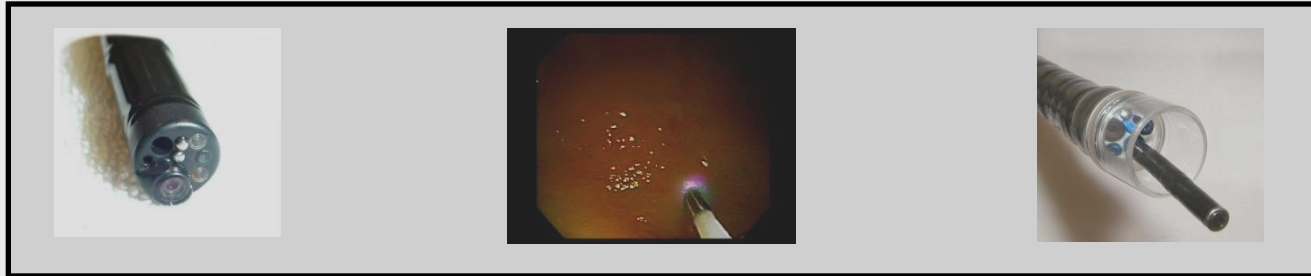


C. Bojarski

25. Januar 2014

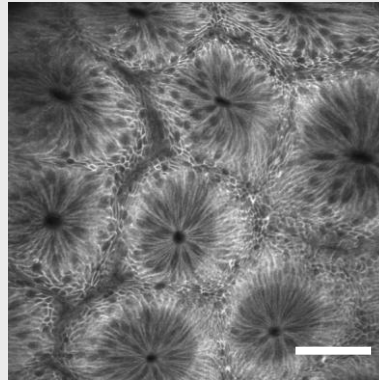
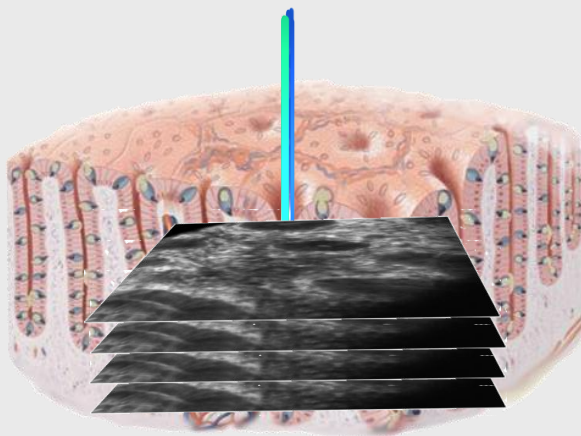
Charité – Centrum 13
Medizinische Klinik für Gastroenterologie,
Infektiologie, Rheumatologie
Direktorin: Prof. Dr. med. B. Siegmund

Der histologische Blick

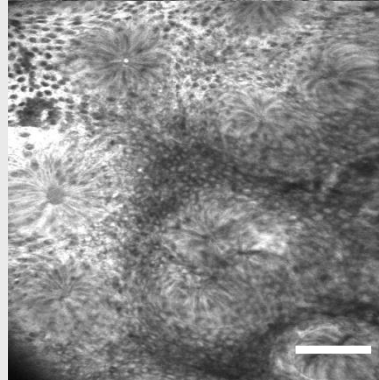


(mit freundlicher
Genehmigung von H. Pohl)

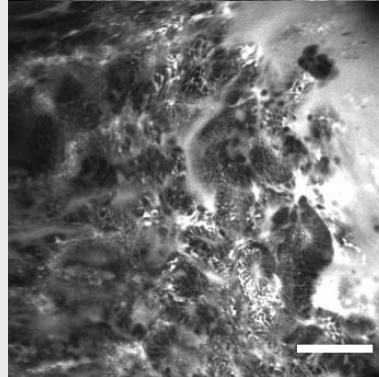
in vivo Mikroskopie - Endomikroskopie



Normal



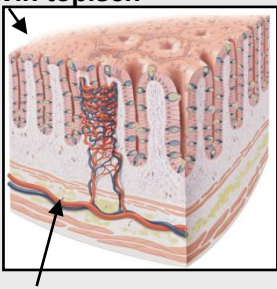
Entzündung



Neoplasie

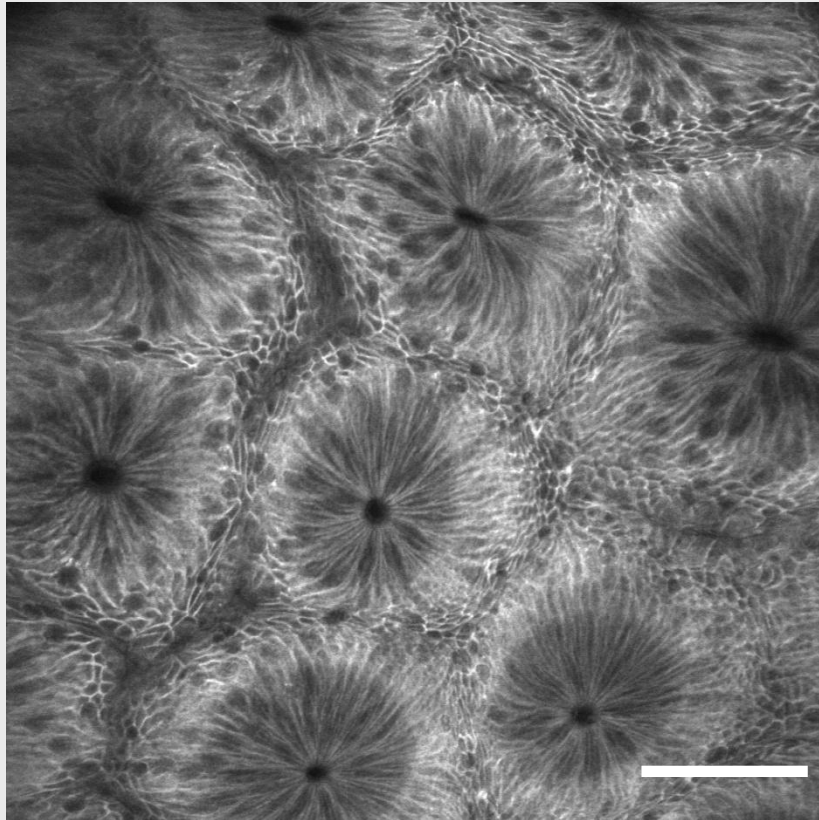
- „gezielte“ Biopsie
- Reduktion von PE
- Methode für Zentren
- molekulare Bildgebung!

Akriflavin topisch

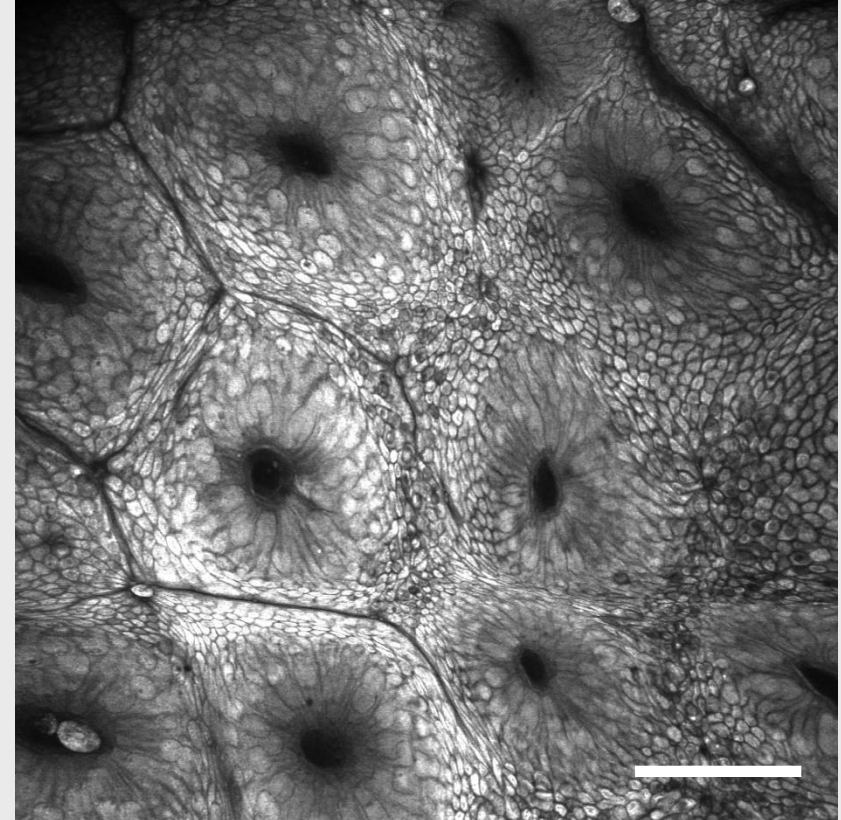


Kontrastfarbstoffe

Fluorescein i.v.

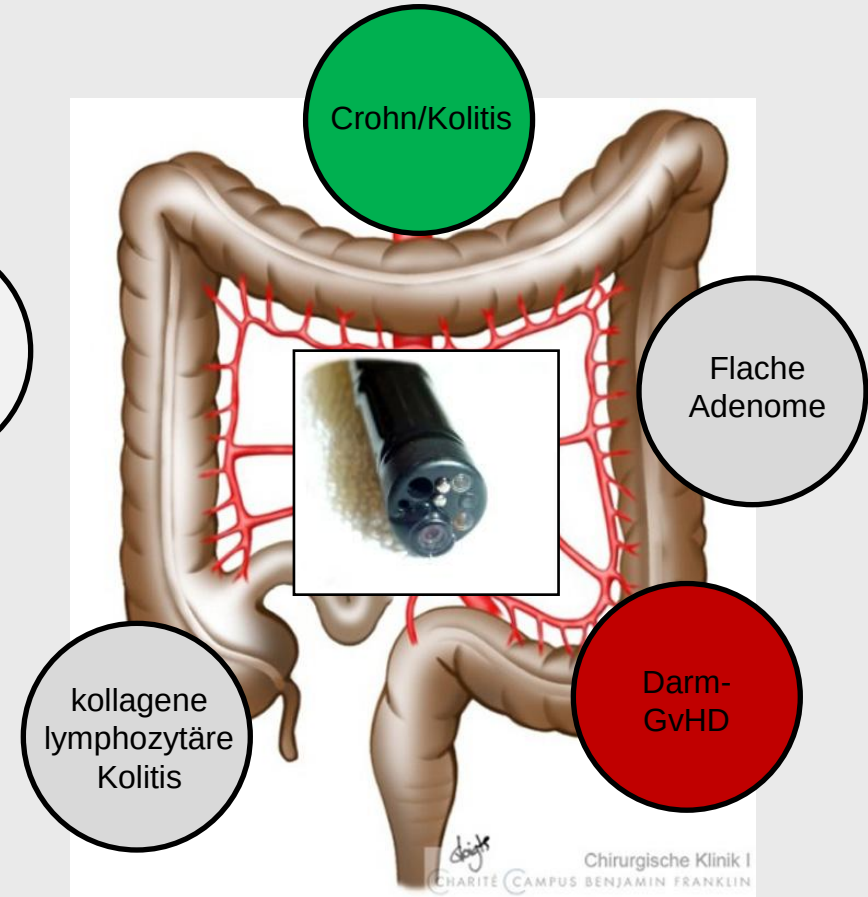
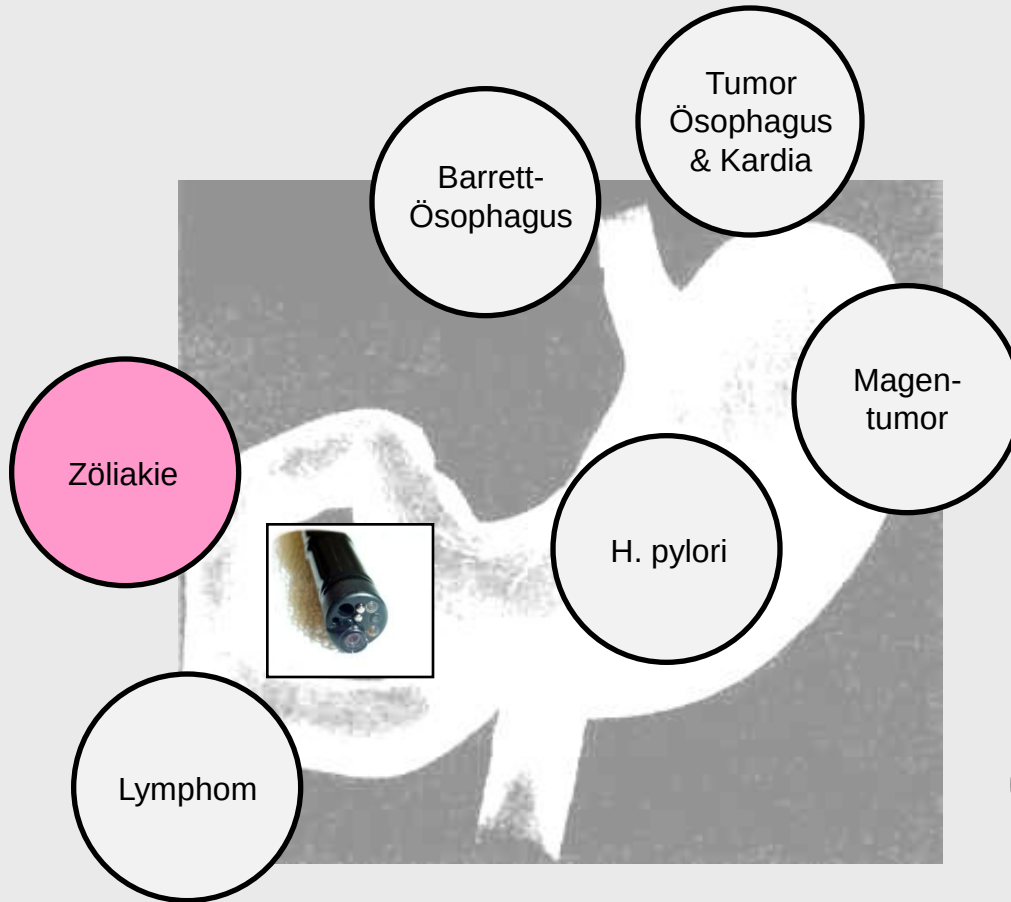


Fluorescein i.v.



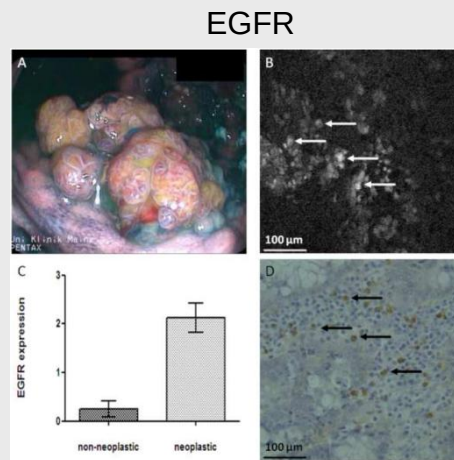
Fluorescein i.v. und Acriflavin topisch

Wann Endomikroskopie ?

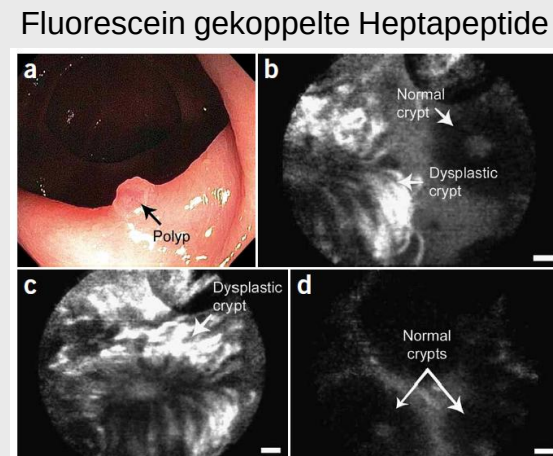


Vision: Molekulares Imaging

- Inkubation mit FITC-markierten Ak (z.B. EGFR)
 - Heptapeptid Sequenz VRPMPLQ + Fluorescein
81% Sens./82% Spez. für dysplastische Krypten
- molekulares Imaging mit hoher Auflösung
- sofortige Analyse von Rezeptoren

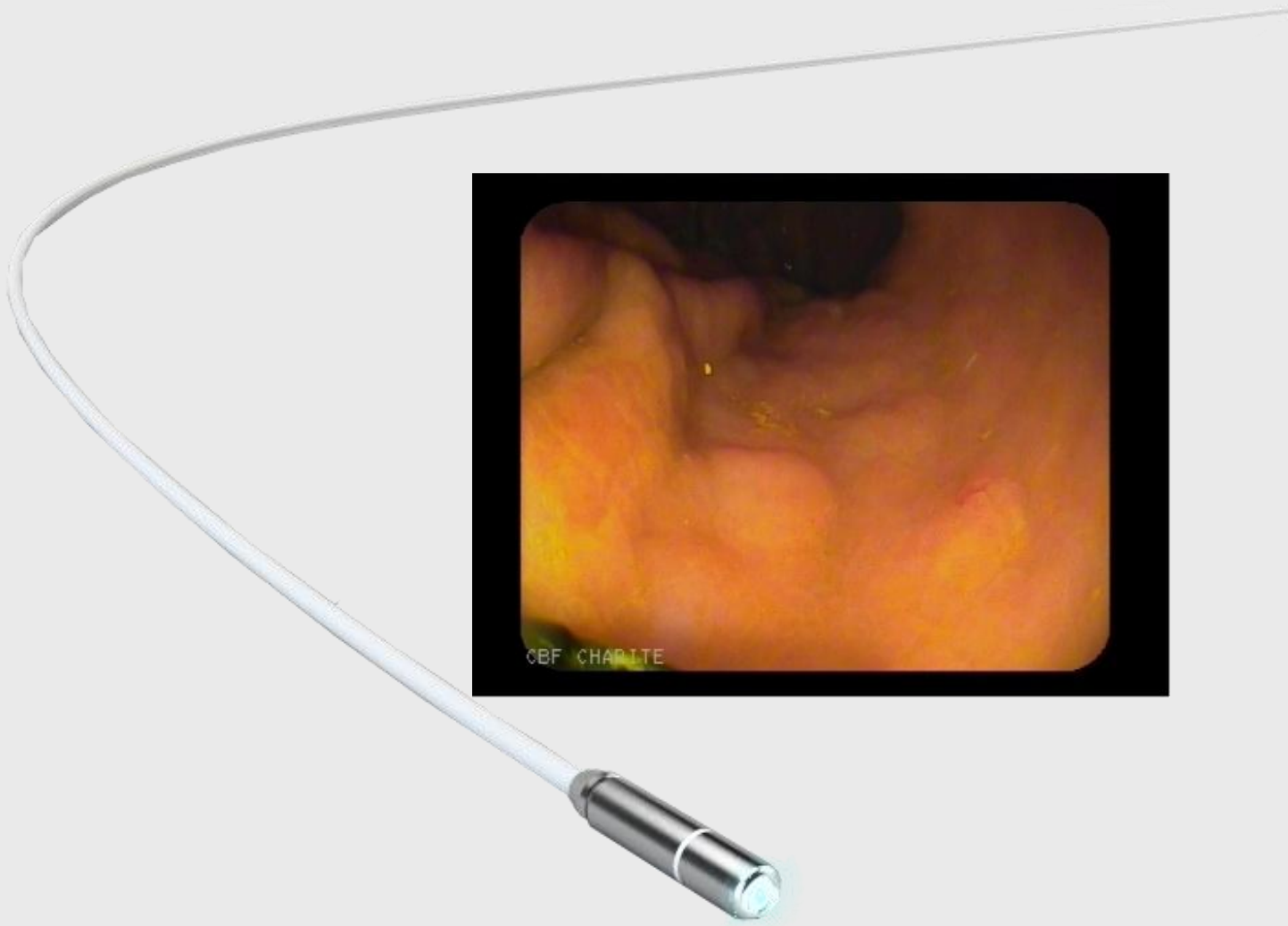


(Götz et al., 2009)

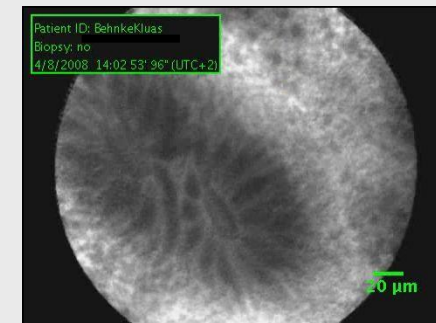
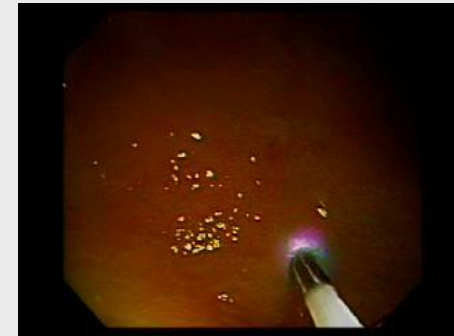
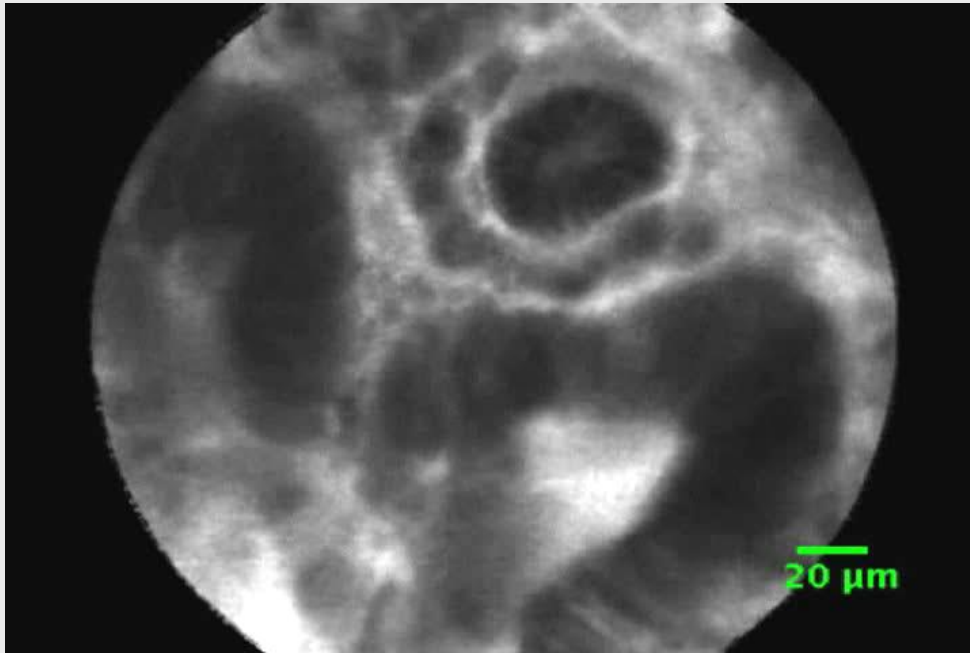


(Hsiung et al., 2008)

Problem 2004 – 2014: kein Update!



probenbasiertes konfokales System



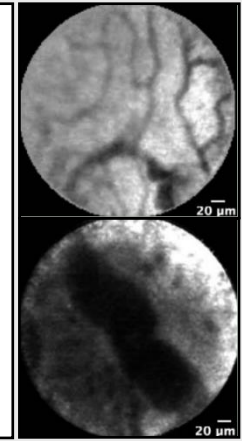
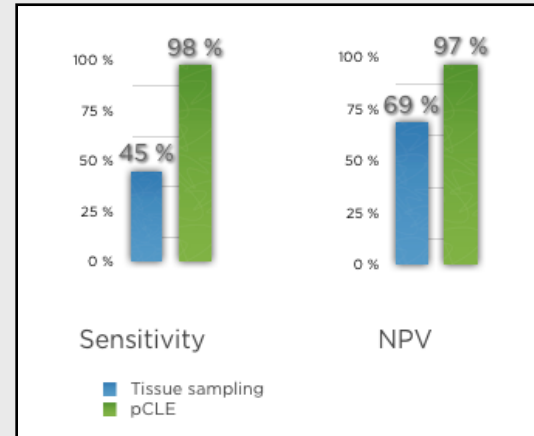
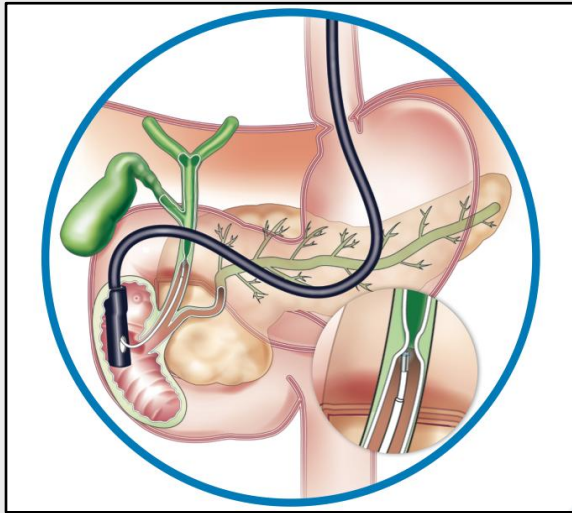
verfügbare Laser-Sonden

Cellvizio®

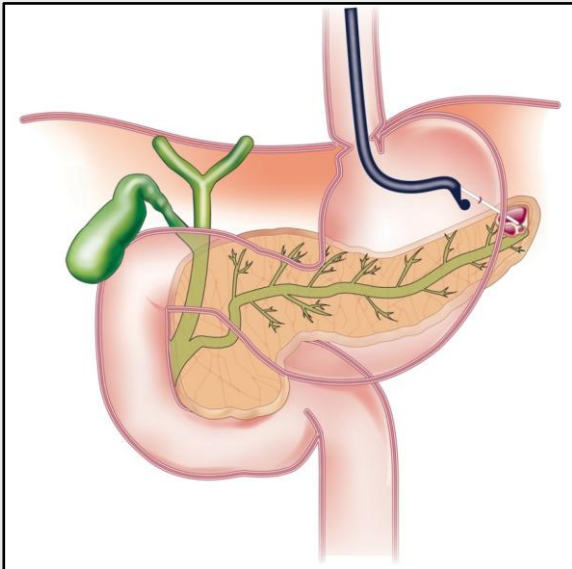
CONFOCAL MINIPROBES™ SUMMARY TABLE

PRODUCT NAME	GASTROFLEX™ UHD	COLOFLEX™ UHD	CHOLANGIOFLEX™	AQ-FLEX™ 19*	ALVEOFLEX™
DISTAL TIP VISUAL					
COMPATIBLE OPERATING CHANNEL	≥ 2.8 mm	≥ 2.8 mm	≥ 1.0 mm	≥ 0.91 mm	≥ 1.9 mm
LENGTH	3 m	4 m	4 m	4m	3 m
MAXIMUM NUMBER OF USES PER PROBE	20	20	10	10	20
USUAL CORRESPONDING PROCEDURE	Eso-Gastro-Duodenoscopy (EGD)	Colonoscopy (compatible with EGD)	Endoscopic Retrograde Cholangio-Pancreatography (ERCP)	Endoscopic UltraSound Fine Needle Aspiration (EUS-FNA)	Bronchoscopy
MAIN PATHOLOGY OF INTEREST	Barrett's Esophagus	- Colonic polyps - Inflammatory Bowel Disease	Indeterminate pancreatico-biliary strictures	Pancreatic cysts	Peripheral Pulmonary Nodules
TECHNICAL SPECIFICATIONS (WITH LSU 488nm)					
FIELD OF VIEW	Ø 240 microns	Ø 240 microns	Ø 325 microns	Ø 325 microns	Ø 600 microns
CONFOCAL DEPTH	55 to 65 microns	55 to 65 microns	40 to 70 microns	40 to 70 microns	0 to 50 microns
RESOLUTION	1 micron	1 micron	3.5 microns	3.5 microns	3.5 microns

präliminäre Daten Gallengang & Pankreas

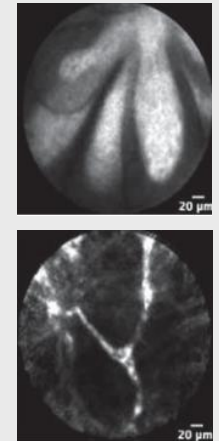


(Meining et al., 2012, Endoscopy)



nCLE zeigt Sensitivität von 59% bei der Detektion muzinöser Neoplasien

(Konda et al., 2013, Endoscopy)

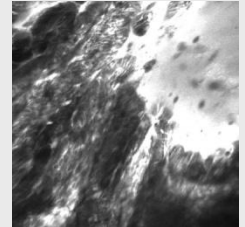
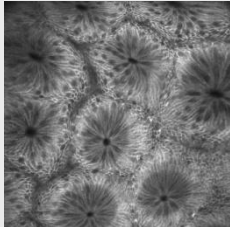


stationäres vs. probenbasiertes System

	konfokale Endomikroskopie	sondenbasierte konfokale Mikroskopie
Haltbarkeit	langlebig	20-50 Untersuchungen
Eindringtiefe	bis 250 µm	max. 70 µm
Mobilität	fester Standort	Arbeitskanal ≥ 2.8 mm
laterale Auflösung	< 1 µm	bis 3,5 µm
Bildaufnahme	statisch	bewegt (statisch)
Kosten	Abhängig von der	Anzahl der Fälle
Blutfluss	(nicht möglich)	(visualisierbar)
Gallen- Pankreasgang	unmöglich	möglich

4:21/2

Fazit



- in vivo Histologie → nur noch konfokale Lasersonde
- Gallengang und Pankreas sind prinzipiell erreichbar
- gezielte Biopsien sind über HD-Endoskopie / Chromoendoskopie auch erreichbar
- Die molekulare Bildgebung im GI-Trakt bleibt Vision
- **Der histologische Blick ist getrübt!**