



QUALITY IN ENDOSCOPY

**UPPER GI ENDOSCOPY
& NEOPLASIA**

**How to stage early esophageal SCC after detection
-- Additional imaging is required for staging**

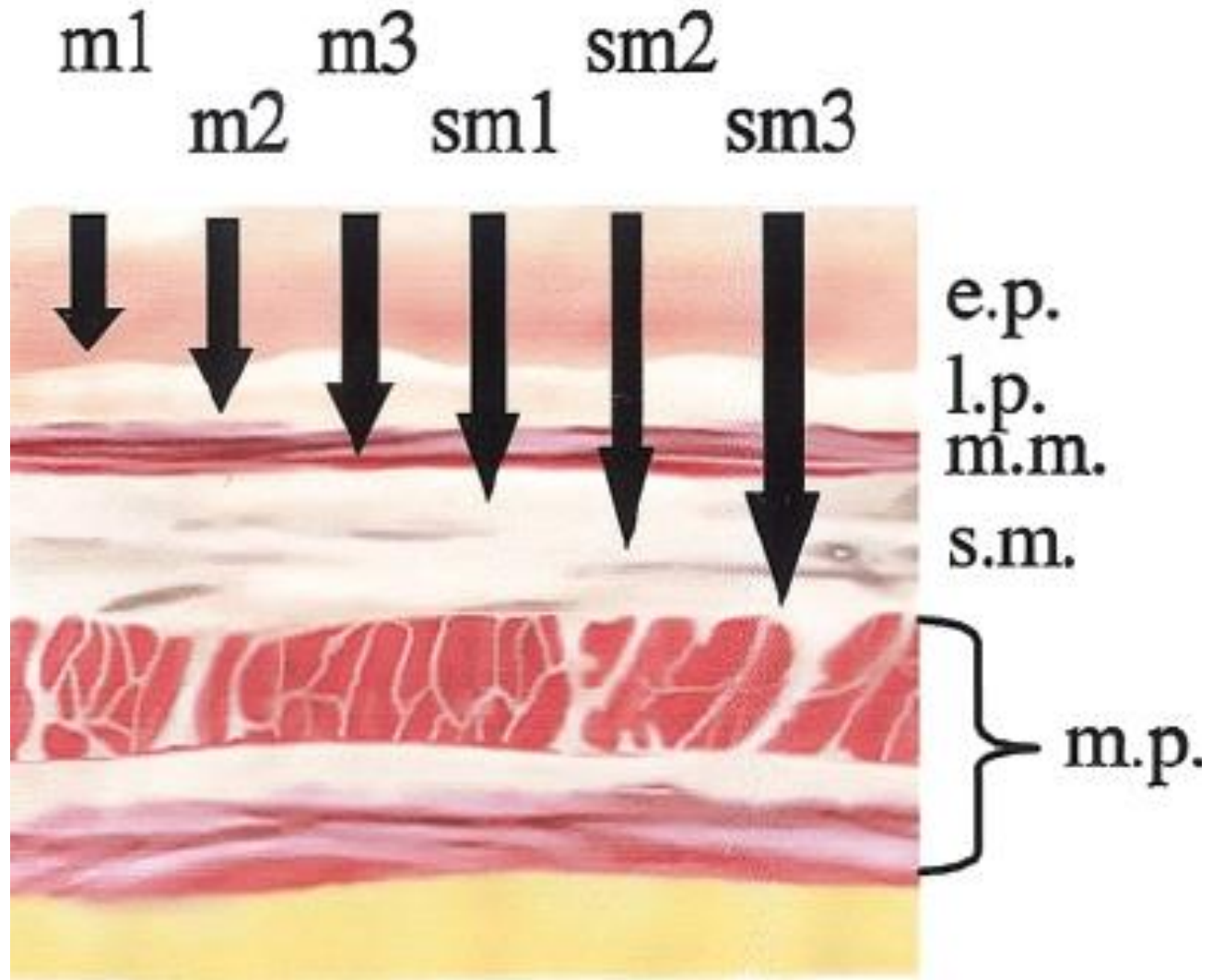
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Country: Germany



The risk of lymph node metastasis determines the success of endoscopic therapy!

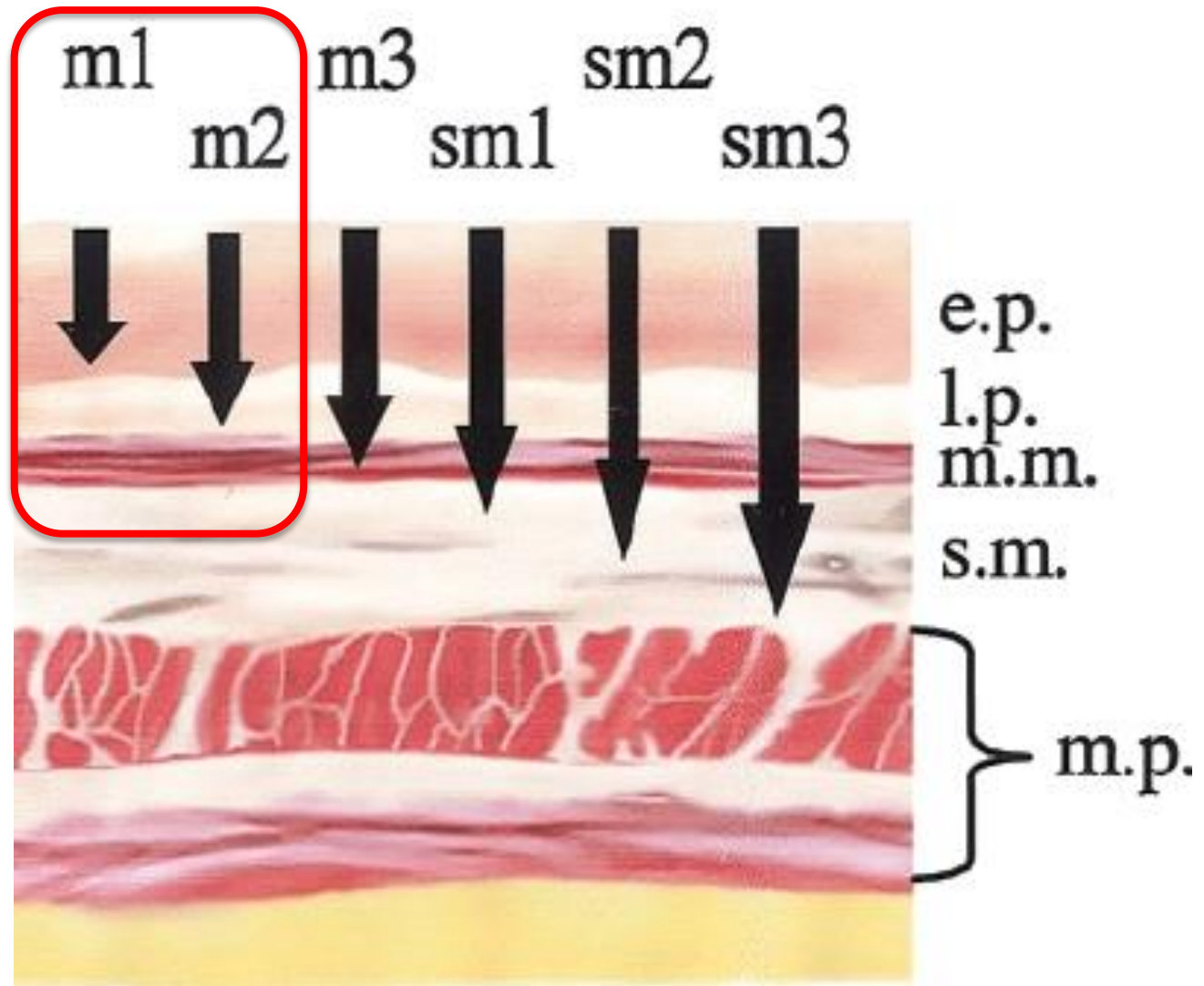


Differences of LNM-Risk in Relation to Location and Depths of Infiltration

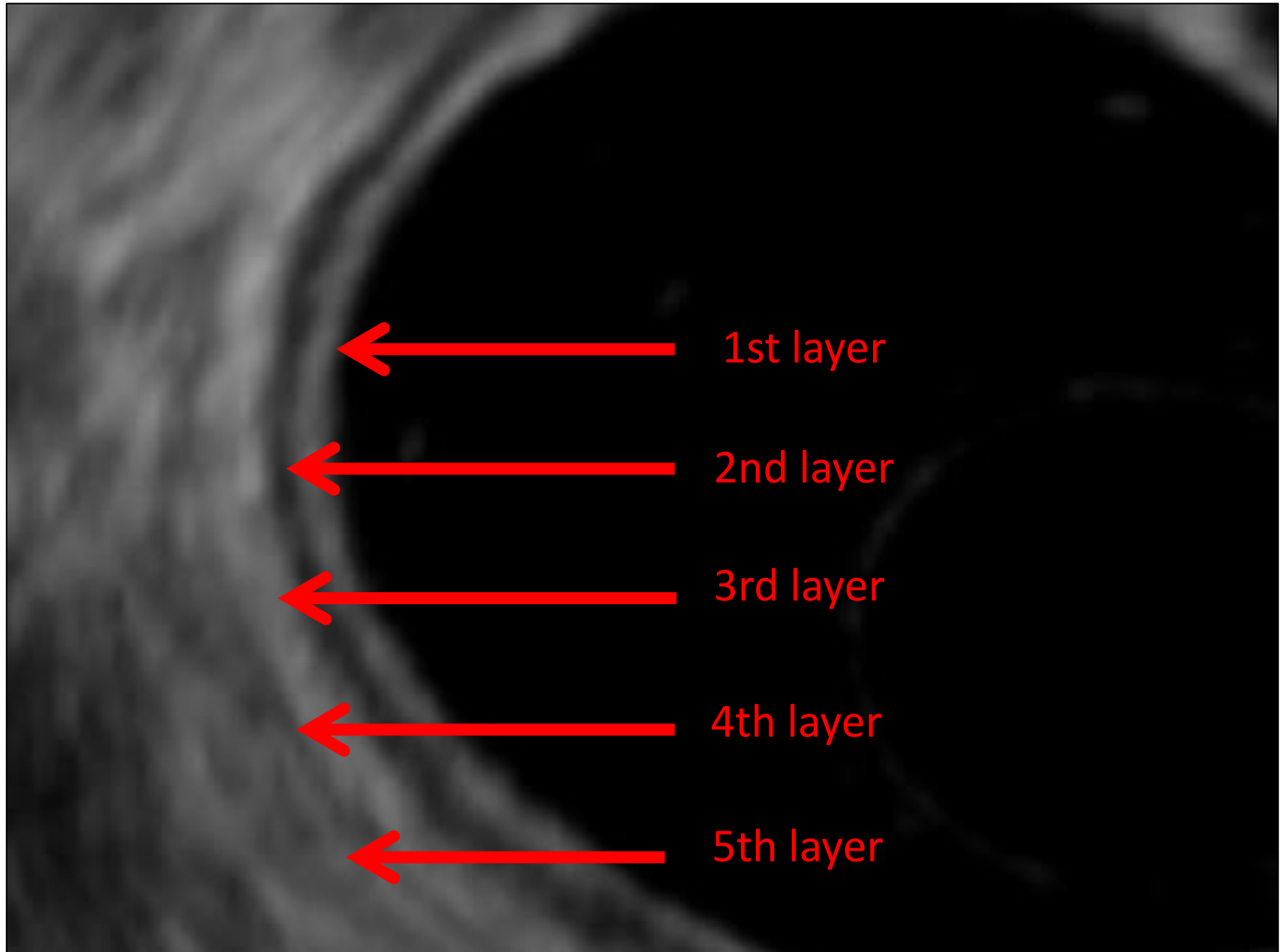
Location	M	SM1 (500 um)
Esophagus (squamous)	0-5%	-7%
Esophagus (Barrett)	0%	-3%
Stomach	0%	-2-3%
Colon	0%	0%

- Nigro 1999, Tajima 2000, Westenerp 2005, Stein 2005, Gotoda 2000, Yasuda 1999, Kitajima 2004, Haggitt 1985, ..

The risk of lymph node metastasis determines the success of endoscopic



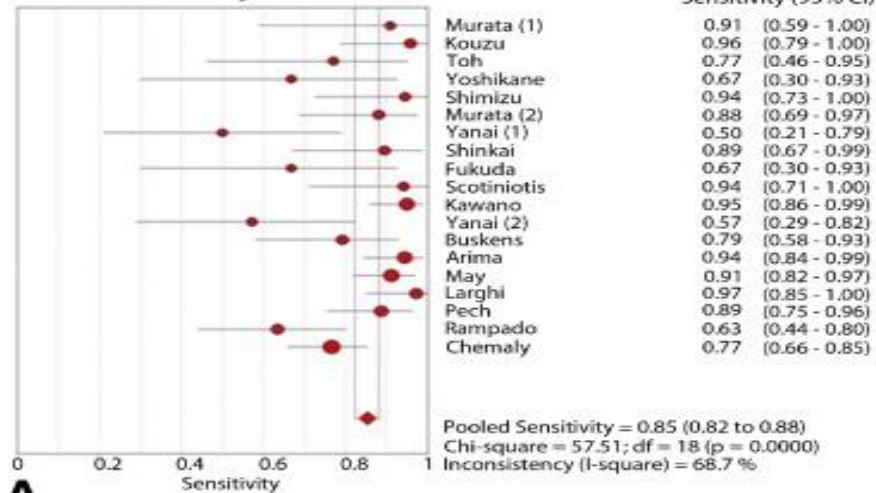
EUS for assessment of depth of infiltration



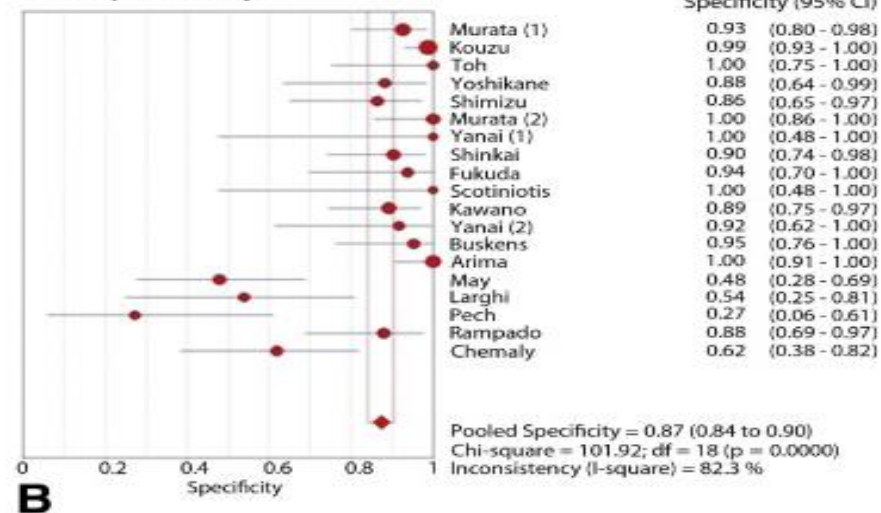
EUS for assessment of sm-invasion; meta-analysis

19 studies, 1019 patients (adeno and SCC)

T1a Sensitivity



T1a Specificity



Thosani et al. GIE 2012

EUS for assessment of submucosal invasion?

EUS before endoscopic resection of early cancers in the esophagus

Specificity 48 %

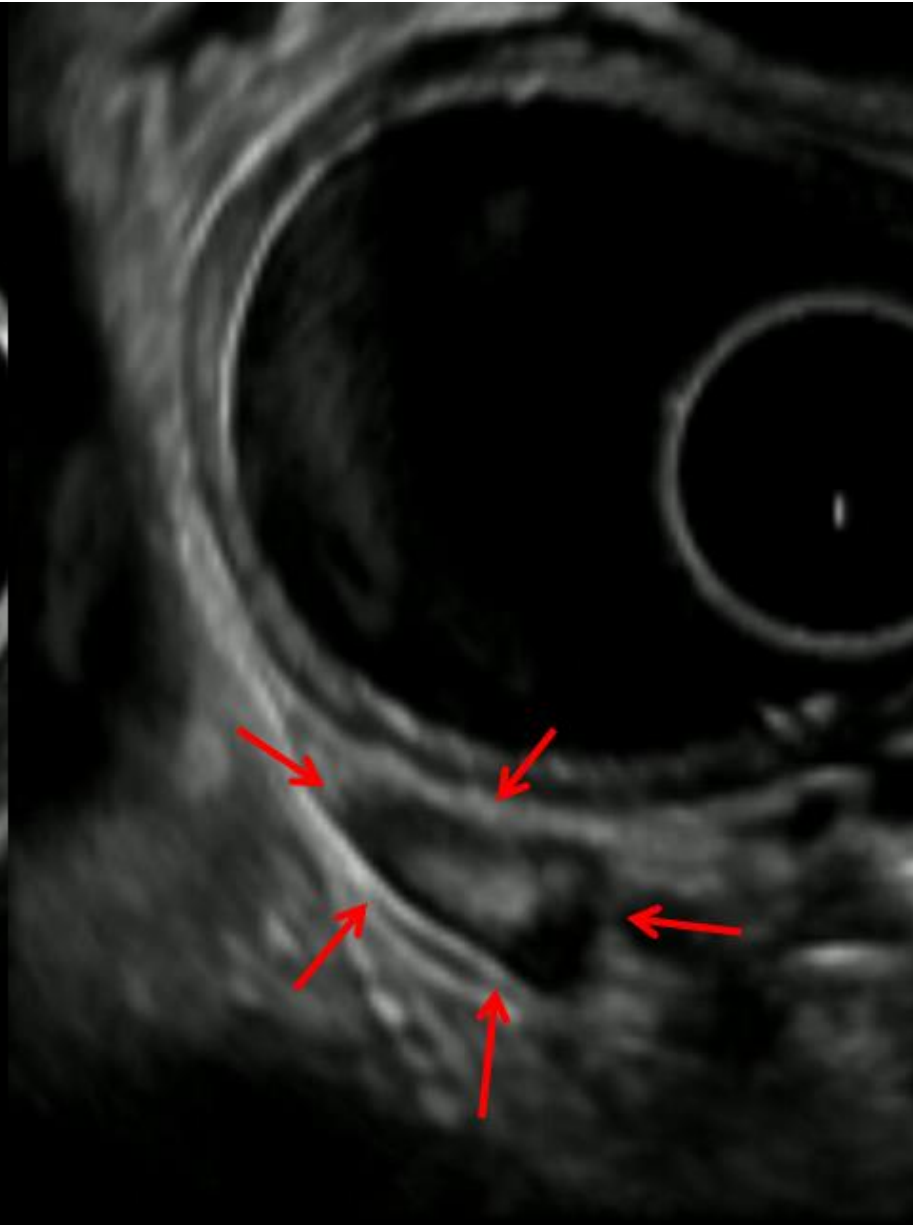
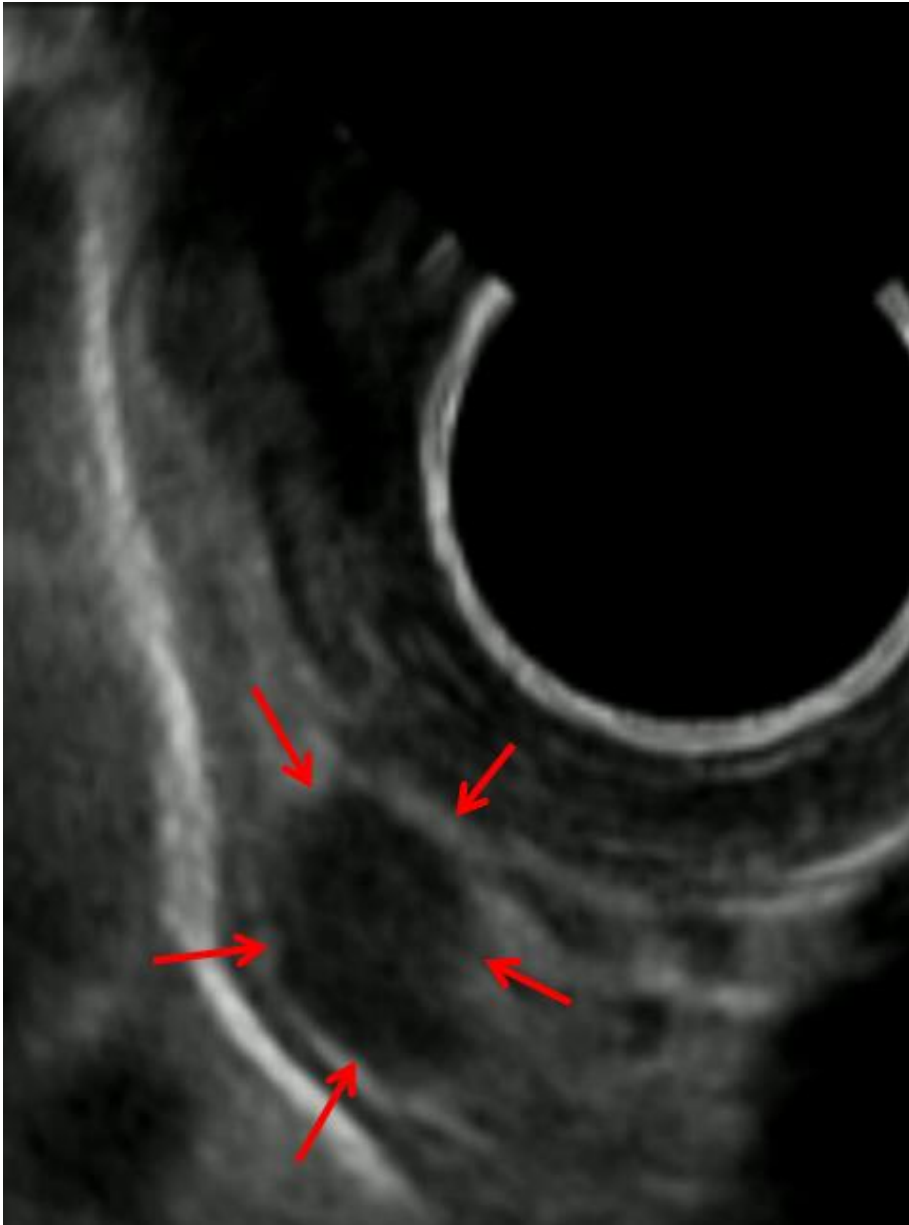
Correct assessment of sm-invasion

Barrett 2/14

SCC 10/11

=> EUS useful for SCC but not for Barretts

EUS for assessment of lymph node metastasis?



EUS for assessment of lymph node metastasis?

Comparison of EUS and histological N staging.

	pN0	pN1	n total	% correct
EUS staging				
EUS N0	82	20	102	80 %
EUS N1	29	48	77	62 %
Total	111	68	179	73 %
Overstaged	26 %	-		
Understaged	-	29 %		

EUS misdiagnosis of SCC => incorrect treatment strategy in 25%
(7% immediate surgery instead of neoadjuvant tx)



Staging accuracy of esophageal cancer by endoscopic ultrasound: A meta-analysis and systematic review

Srinivas R Puli, Jyotsna BK Reddy, Matthew L Bechtold, Daphne Antillon, Jamal A Ibdah, Mainor R Antillon

	EUS	EUS-FNA
Studies	44	4
Pooled sensitivity (%)	84.7 (82.9-86.4)	96.7 (92.4-98.9)
Pooled specificity (%)	84.6 (83.2-85.9)	95.5 (91.0-98.2)
Positive likelihood ratio	3.3 (2.6-4.3)	7.3 (0.9-54.3)
Negative likelihood ratio	0.24 (0.9-0.3)	0.05 (0.01-0.64)
Diagnostic odds ratio	19.1 (12.7-28.5)	164.5 (4.5-6027.7)

Other methods?

CT, bronchoscopy, PET-CT, MRI

... only for advanced tumors (as determined by EUS) but not for superficial SCC!

Conclusion

- In contrast to distal adenocarcinomas, early SCC imply a greater risk for LNM
 - Adequate assessment of depth of infiltration and presence of LNM is therefore mandatory
 - EUS (plus FNA) is currently the method of choice to rule out deeper infiltration and LNM
- => **EUS should be performed in all cases with early SCC!**