AGA Clinical Practice Update on Surveillance After Pathologically Curative Endoscopic Submucosal Dissection of Early Gastrointestinal Neoplasia in the United States: Commentary

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The Emoroid Digest
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Principles of Curative ESD

- Proper lesion selection – consider location, size, depth of invasion, and recurrence risk
- En bloc resection with removal of the endoscopically visible lesion in 1 piece
- Histopathologic criteria associated with minimal risk of recurrence and lymph node (LN) metastases (all criteria must be satisfied):
  1) Circumferential and deep margins are microscopically devoid of malignant cells (R0 resection)
  2) Well (G1) or moderate (G2) differentiation
  3) Absence of lymphovascular invasion (LVI)
  4) Low-grade (Grade 1) or absent tumor budding
  5) Absence of deep invasion
     a) Esophageal and gastric adenocarcinoma: invasion <500 µm below the muscularis mucosa
     b) Colorectal adenocarcinoma: invasion <1000 µm below the muscularis mucosa
     c) Esophageal squamous cell carcinoma: invasion to muscularis m2 mucosa only

Esophageal Dysplasia & Squamous Cell Carcinoma

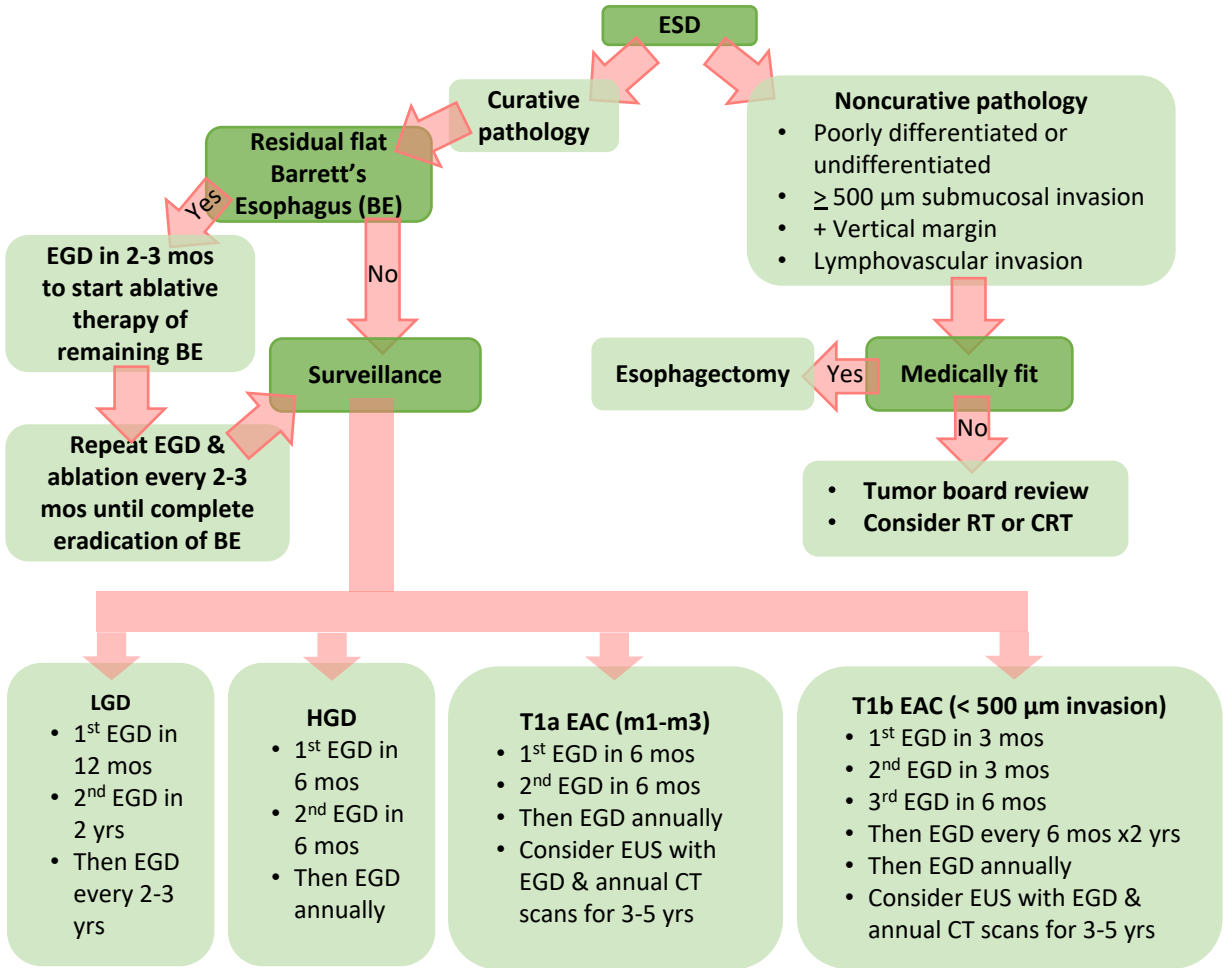
Surveillance After Curative ESD

	1st follow-up endoscopy	2nd follow-up endoscopy	Subsequent endoscopy	Need for EUS	Need for CT	Risk of LN metastasis (affected by size)
Low Grade Dysplasia (LGD)	6-12 mos	12 mos	Annually	No	No	0 %
High Grade Dysplasia (HGD)	6-12 mos	6-12 mos	6-12 mos after 2 y from ESD then annually	No	No	0 %
T1a, m1-m2 esophageal SCC	3-6 mos	3-6 mos	6-12 mos after 2 y from ESD then annually	Consider with each EGD	Consider annually for 3-5 y	8-18 %

- Local recurrence often occurs within 1 year but can present up to 2-3 years later
- If non-curative ESD due to a positive horizontal margin, treat endoscopically (resection or ablation) & follow

Barrett's Dysplasia & Esophageal Adenocarcinoma

Pathway for Clinical Management After ESD



- ESD involving > 75% of the esophageal lumen → risk of post-ESD stricture
  - Stricture prevention: steroid injection into the ESD submucosa or ingested viscous budesonide slurry
  - Consider EGD at 4 weeks for dilation with repeat every 1-2 weeks until resolution

Wang AY, Hwang JH, Bhatt A, Draganov PV. AGA Clinical Practice Update on Surveillance After Pathologically Curative Endoscopic Submucosal Dissection of Early Gastrointestinal Neoplasia in the United States: Commentary. Gastroenterology. 2021 Dec;161(6):2030-2040.e1. doi: 10.1053/j.gastro.2021.08.058. Epub 2021 Oct 21. PMID: 34689964.

Gastric Dysplasia & Adenocarcinoma

Surveillance After Curative ESD

	1st follow-up endoscopy	2nd follow-up endoscopy	Subsequent endoscopy	Need for EUS	Need for CT	Risk of LN metastasis (affected by size)
LGD	6-12 mos	12 mos	Annually	No	No	0 %
HGD	6-12 mos	6-12 mos	Annually	No	No	0 %
T1a, Gastric adenocarcinoma	6 mos	6 mos	Annually	Consider	Consider	< 1-5.1 %
T1b, Sm1 Gastric adenocarcinoma	3-6 mos	3-6 mos	Annually	Every 6-12 mos for 3-5 yrs	CT chest & abd every 6-12 mos for 3-5 yrs	2.6-10.6 %

- For T1a and T1b lesions, size (≤ 3 cm) and histologic grade (differentiated vs undifferentiated) affect the risk of LN metastasis and thus determine if ESD is curative
- *Helicobacter pylori* eradication is associated with lower rates of metachronous gastric cancer

Colon Dysplasia & Adenocarcinoma

Surveillance After Curative ESD

	1st follow-up colonoscopy	2nd follow-up colonoscopy	Subsequent colonoscopy	Need for EUS	Need for CT	Risk of LN metastasis (affected by size)
• Adenoma + LGD* • SSL without dysplasia*	1 yr	3 yrs after 1st surveillance	Revert to USMSTF	No	No	0 %
• TSA • SSL + dysplasia • HGD • CIS • Dysplasia + IBD	6-12 mos	1 yr after 1st surveillance	3 yrs after 2nd surveillance, and then revert to USMSTF (IBD: may need annually)	No	No	0 %
T1, Sm1 colonic adenocarcinoma	3-6 mos	6 mos after 1st surveillance	3 yrs after 2nd surveillance, and then revert to USMSTF	No	No+	< 1 %

- *For lower risk lesions of larger size (i.e. > 50 mm), consider closer post-ESD surveillance
- +NCCN does not recommend CT or CEA testing after surgical resection of T1 colon adenoca. but this guidance might not be generalizable to local excision by ESD, can consider CT

Rectal Dysplasia & Adenocarcinoma

Surveillance After Curative ESD

	1st follow-up endoscopy	2nd follow-up endoscopy	Subsequent endoscopy	Need for EUS	Need for CT	Risk of LN metastasis (affected by size)
• Adenoma + LGD • SSL without dysplasia	Flex sig at 1 yr	Colonoscopy 3 yrs after 1st surveillance	Revert to USMSTF recommendations	No	No	0 %
• TSA • SSL + dysplasia • Adenoma + HGD • CIS • Dysplasia + IBD	Flex sig at 6-12 mos	Colonoscopy 1 yr after 1st surveillance	Colonoscopy 3 yrs after 2nd surveillance, and then revert to USMSTF (IBD: may need annually)	No	No	0 %
T1, Sm1 rectal adenocarcinoma + size < 3 cm	Flex sig at 3-6 mos	Flex sig at 6 mos after 1st surveillance Colonoscopy at 1 yr after ESD If advanced adenoma, repeat in 1 yr; if no advanced adenoma, repeat in 3 yrs, then as per USMSTF	Flex sig every 6 mos for a total of 5 yrs from ESD, then revert to USMSTF	EUS or pelvic MRI with contrast every 3-6 mos for 2 yrs, then every 6 mos to complete 5 yrs	Consider annually for 3-5 yrs	3-6 %

- Recurrence of rectal cancer > recurrence for early colon cancer
- Recurrence of rectal cancer can be at a distant site and appear after 3-5 yrs
- Thus, surveillance following curative ESD for T1 rectal adenoca. is intensive when compared to early colon cancer

Abbreviations

SSL, sessile serrated lesion
TSA, traditional serrated adenoma
CIS, carcinoma in situ
USMSTF, US Multi-Society Task Force Recommendations

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