Cancer Surgery Standards PROGRAM
AMERICAN COLLEGE OF SURGEONS

CoC Operative Standard 5.6
Colon Resection

August 25, 2022

Presentation created by CSSP Education Committee

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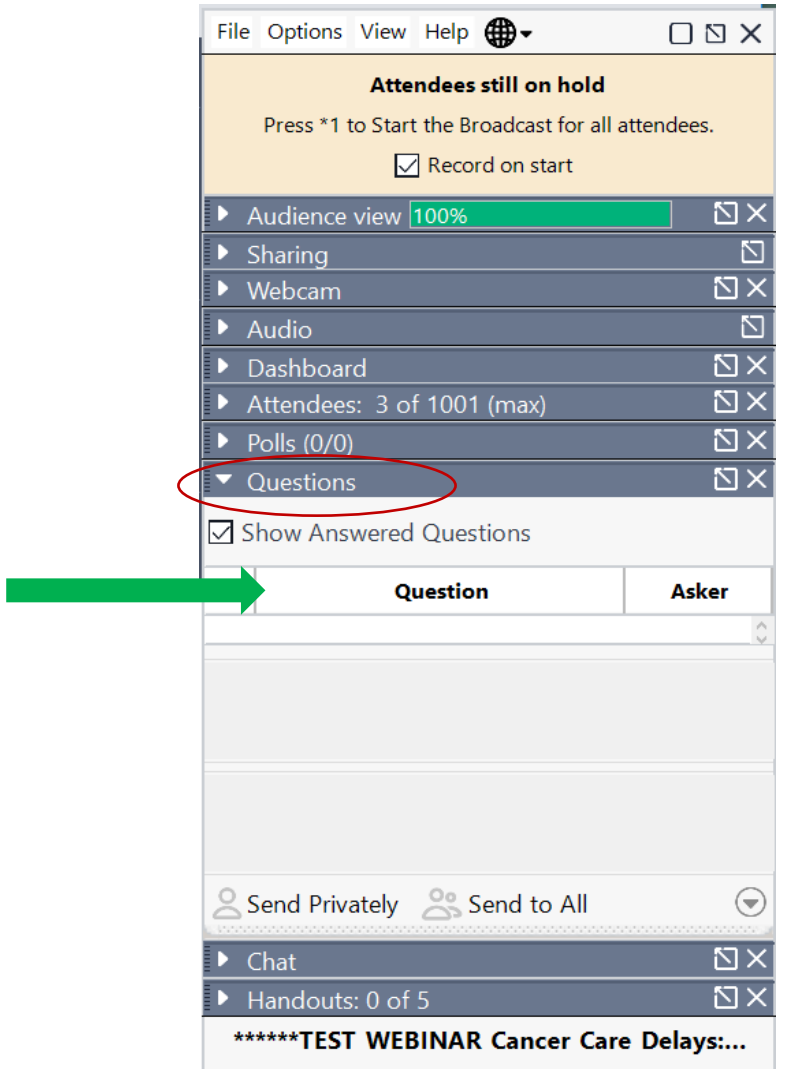
Webinar Logistics

- All participants are muted during the webinar
- Questions – including technical issues you may be experiencing – should be submitted through the question pane
- Questions will be answered as time permits
- Please complete the post-webinar evaluation you will receive via email



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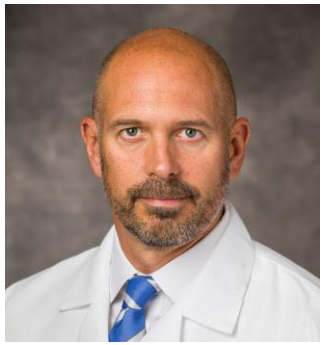

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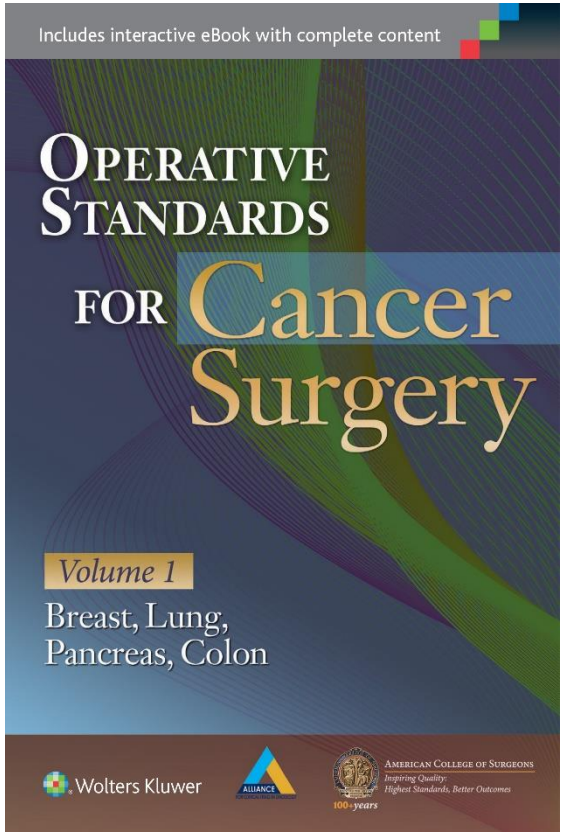
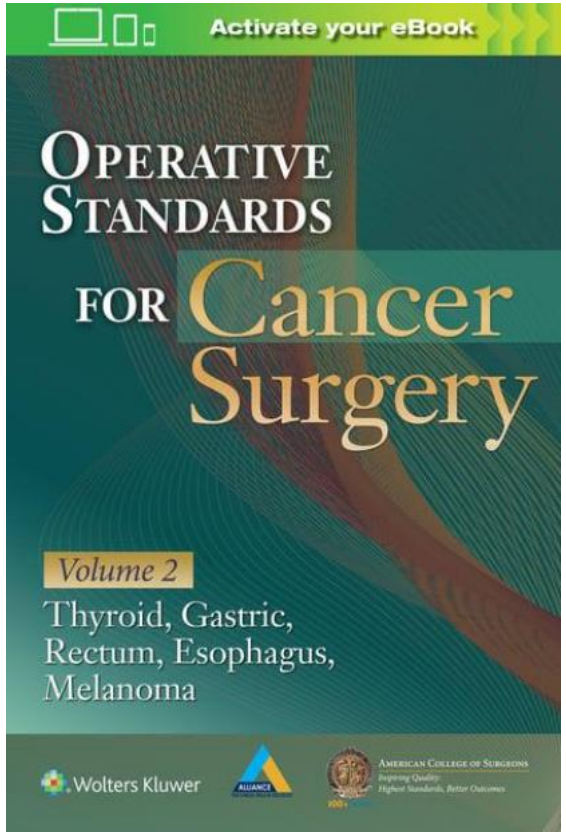
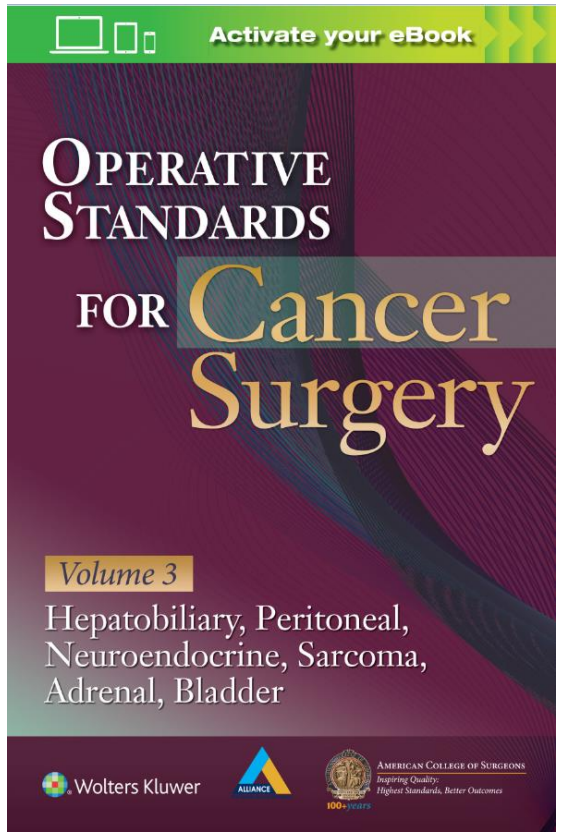
Operative Standards for Cancer Surgery







Coming soon!

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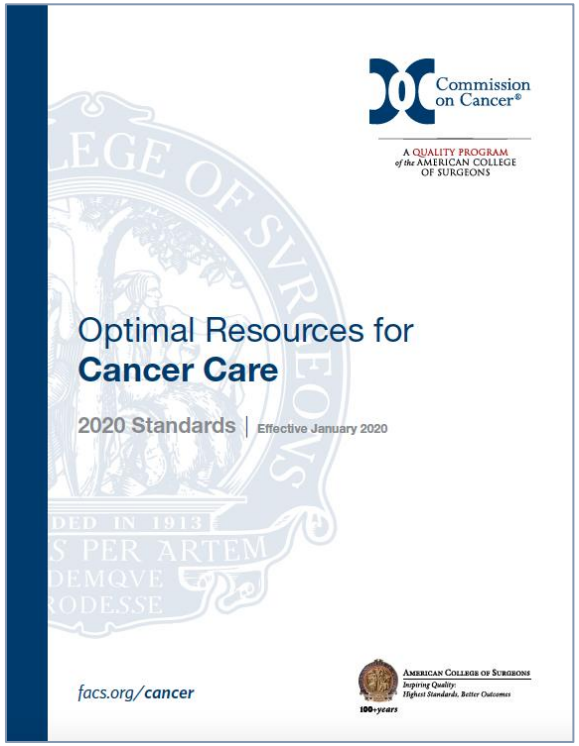
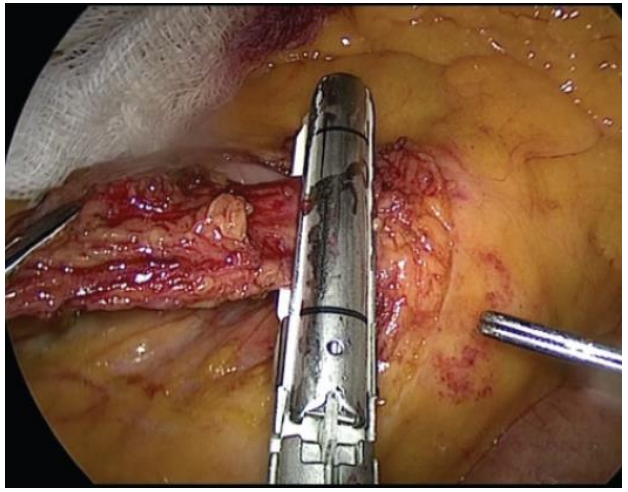
The CoC Operative Standards



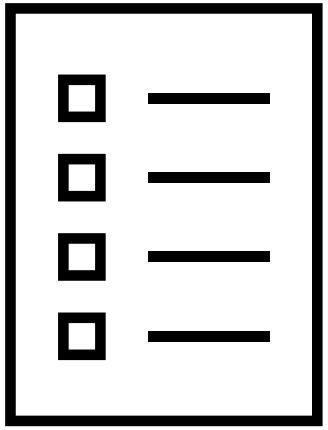
Standard	Disease Site	Procedure	Documentation
5.3	Breast	Sentinel node biopsy	Operative report
5.4	Breast	Axillary dissection	Operative report
5.5	Melanoma	Wide local excision	Operative report
5.6	**Colon**	**Colectomy (any)**	**Operative report**
5.7	Rectum	Mid/low resection (TME)	Pathology report (CAP)
5.8	Lung	Lung resection (any)	Pathology report (CAP)

CoC Compliance Measures: Standard 5.6

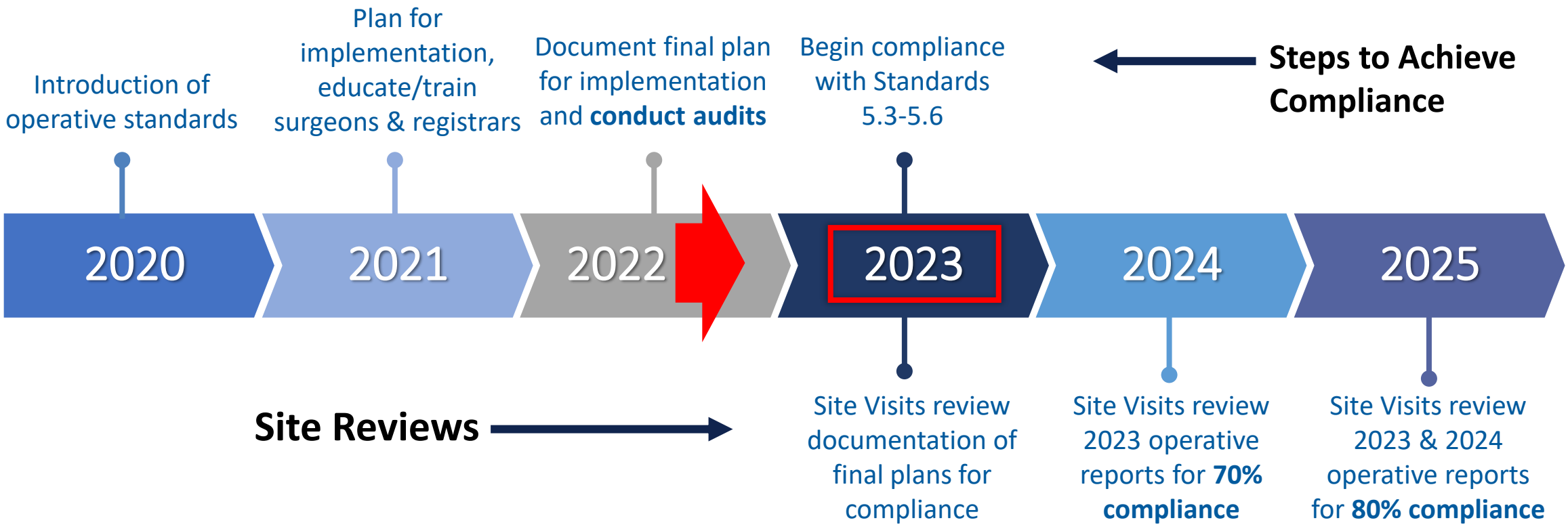
1) Technical: Resection of the tumor-bearing bowel segment includes:
   - **a) Complete lymphadenectomy** *en bloc*
   - **b) Proximal vascular ligation** at origin of primary feeding vessel(s)



2) Documentation: Operative reports for colon cancer resections contain the **minimum required reporting elements** in **synoptic format**
   - a) Curative intent
   - b) Tumor location
   - c) Extent of colon & vascular resection
     - i. If deviations exist, documentation of why



Timeline for Standards 5.3-5.6



Why colon resection as an operative standard?

- Proximal vascular ligation with *en bloc* lymphadenectomy **optimizes complete resection of the associated lymph nodes** for pathologic evaluation

- The number of lymph nodes resected surgically and evaluated pathologically reflects the completeness of lymphadenectomy and is an **indicator of surgical quality and oncologic outcome**

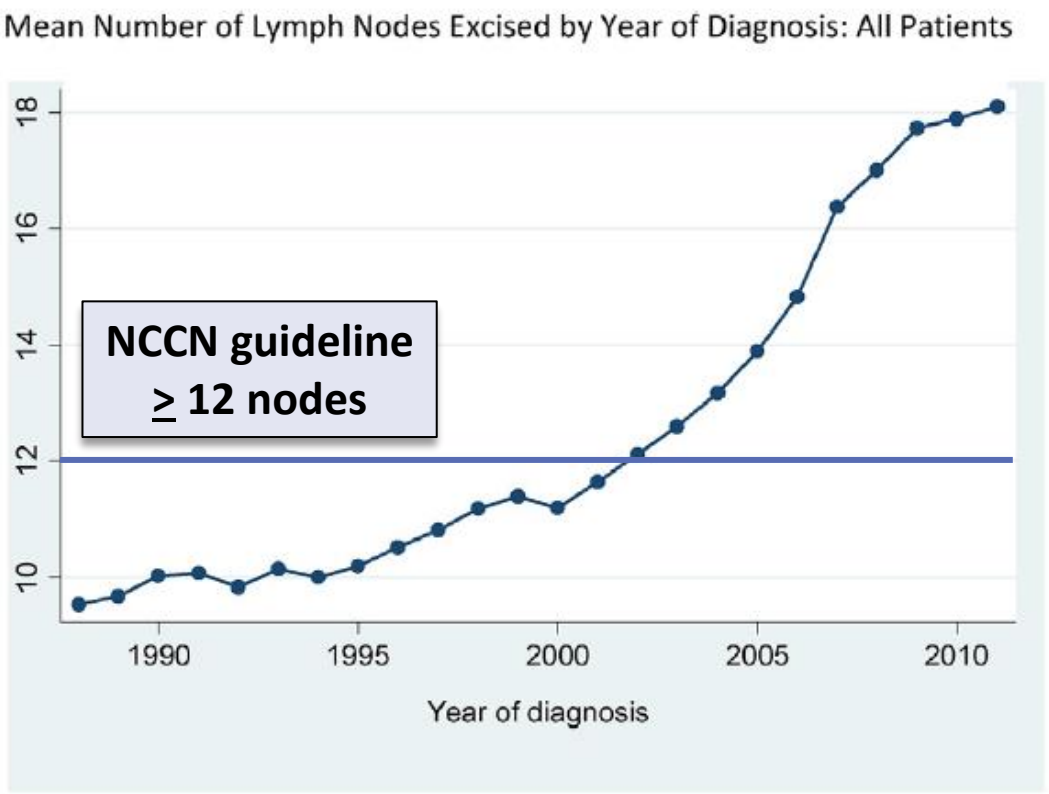
Adequate lymphadenectomy is associated with improved oncologic outcomes

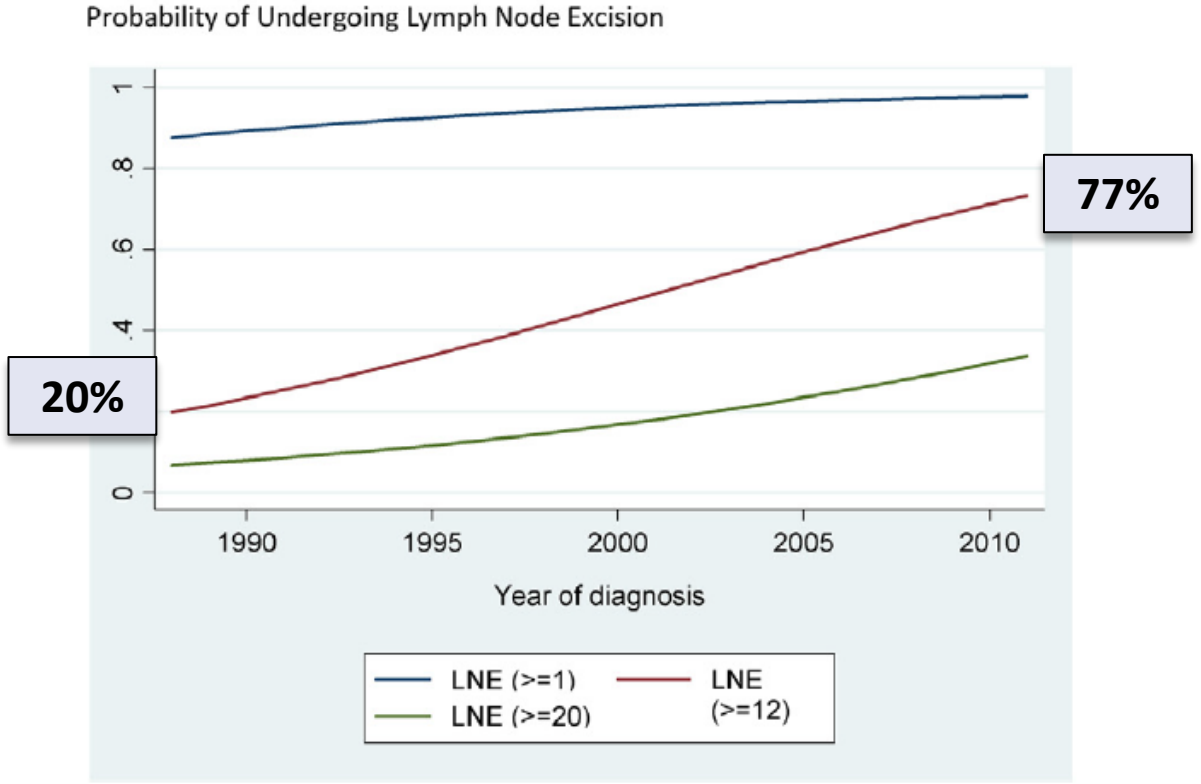
- Analysis of Intergroup 0089 data informed the **NCCN minimum of 12 nodes** to establish the N-stage

Stage	No. of lymph nodes	Overall survival, %	*P*†	Cause-specific survival, %	*P*†	Disease-free survival, %	*P*†
II	<11	73	<.001	80	.015	72	.11
	11–20	80		85		79	
	>20	87		92		83	
IIIA–IIIB	<11	67	<.001	74	.002	65	<.001
	11–40	74		78		70	
	>40	90		93		93	
IIIC	1–35	51	.002	55	.018	48	.014
	>35	71		71		69	

LeVoyer TE et al 2003, *J Clin Oncol*

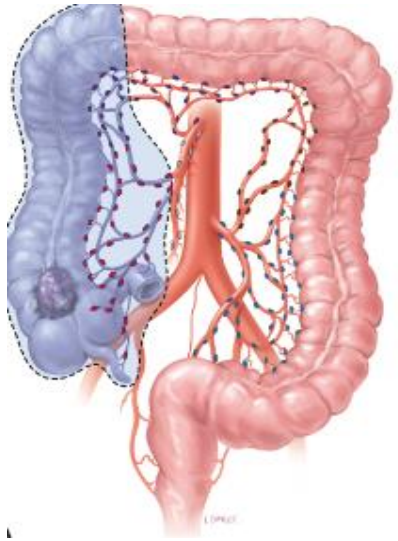
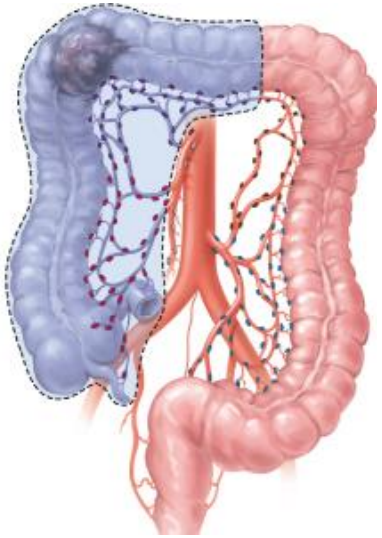
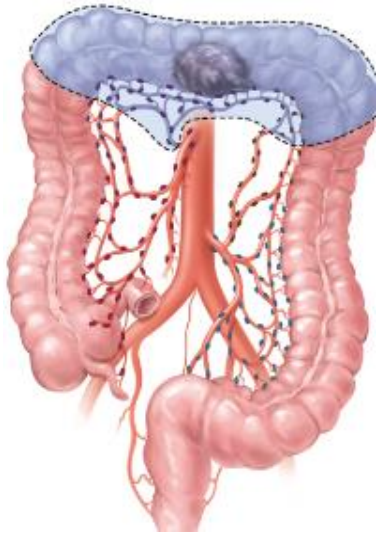
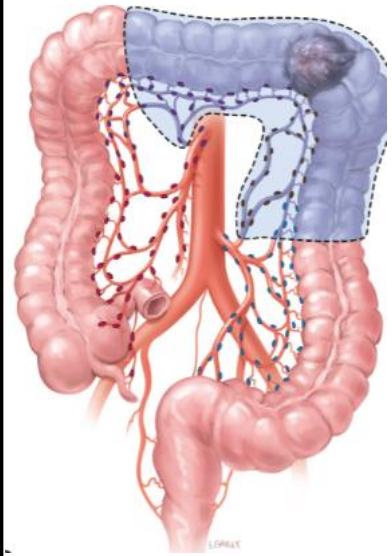
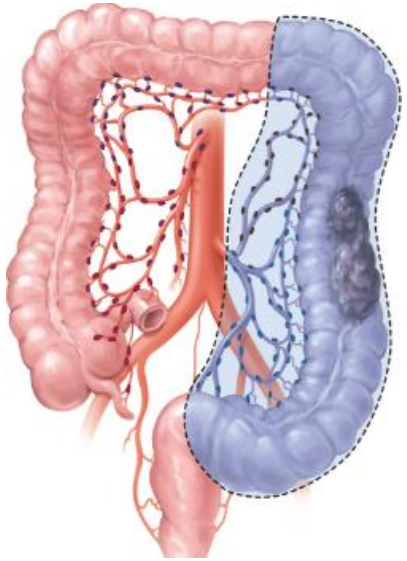
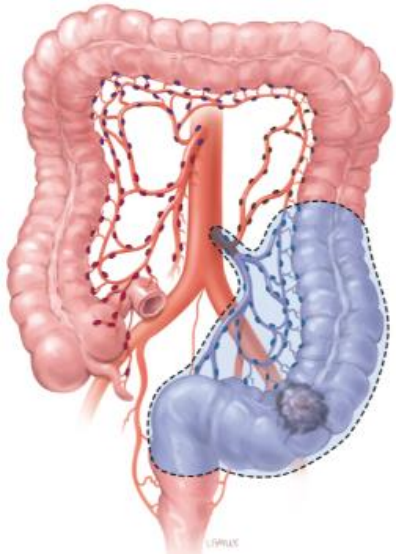
Adequate lymphadenectomy for colon cancer has improved over time



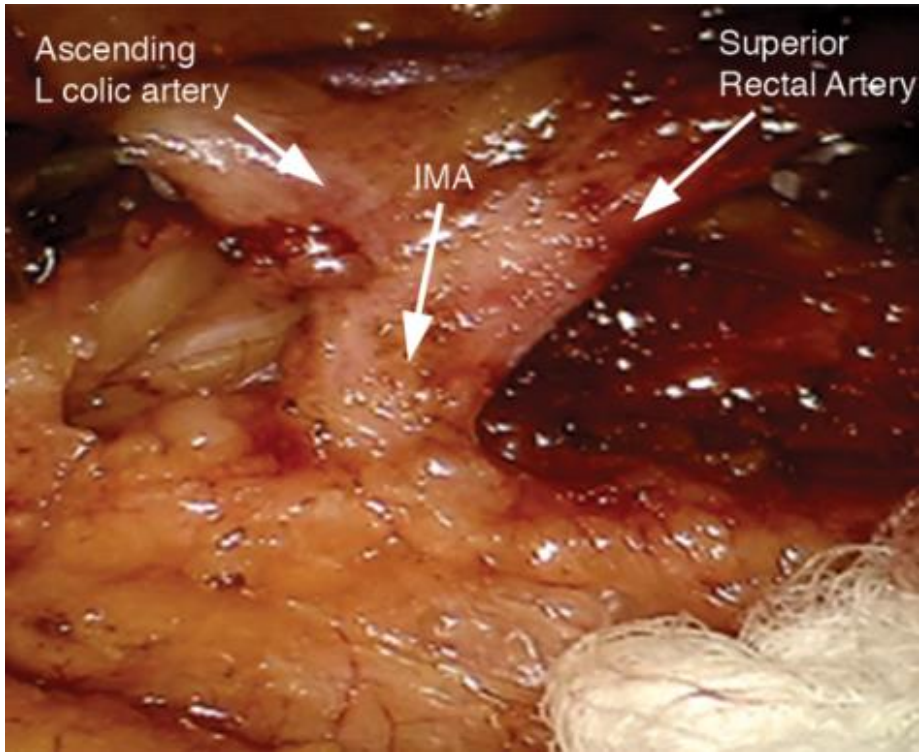


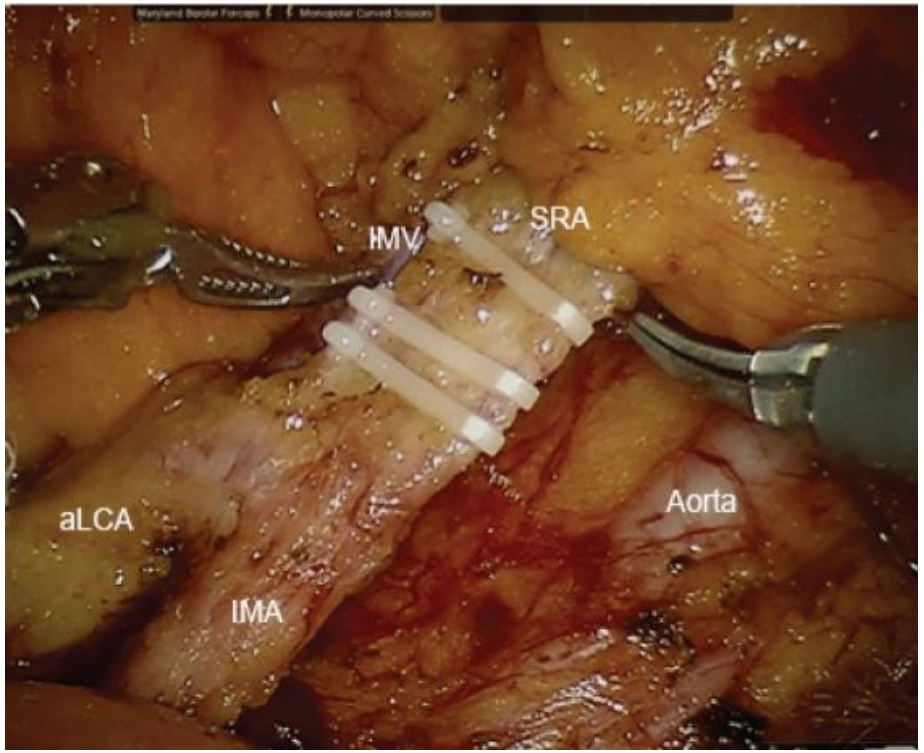
Garcia B et al 2016, *Surg Oncol*

CoC Compliance Measures: Standard 5.6

Right	Hepatic flexure	Transverse	Splenic flexure	Left	Sigmoid
					
Ileocolic, right colic *(if present)*	Ileocolic, right colic *(if present)*, middle colic	Middle colic	Middle colic, ascending left colic	Inferior mesenteric + ascending left colic	Inferior mesenteric

CoC Compliance Measures: Standard 5.6





Katz et al. 2018, Operative Standards for Cancer Surgery

CoC Compliance Measures: Standard 5.6

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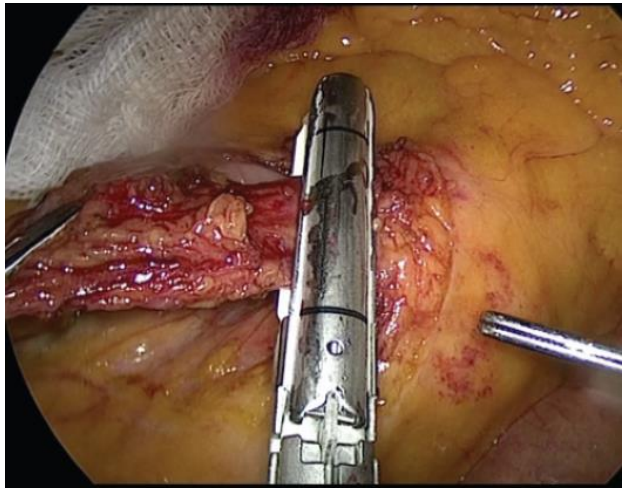

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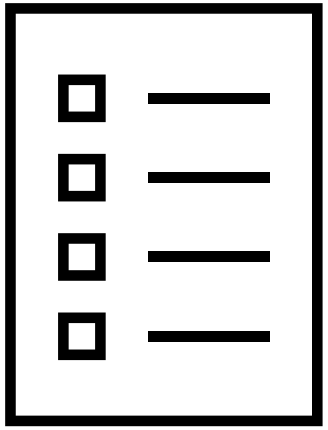
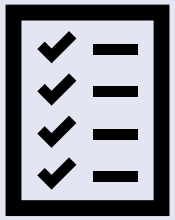
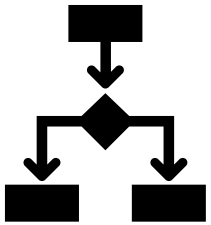


Definition of Synoptic Reporting



Standardized data elements organized as a **structured checklist or template**



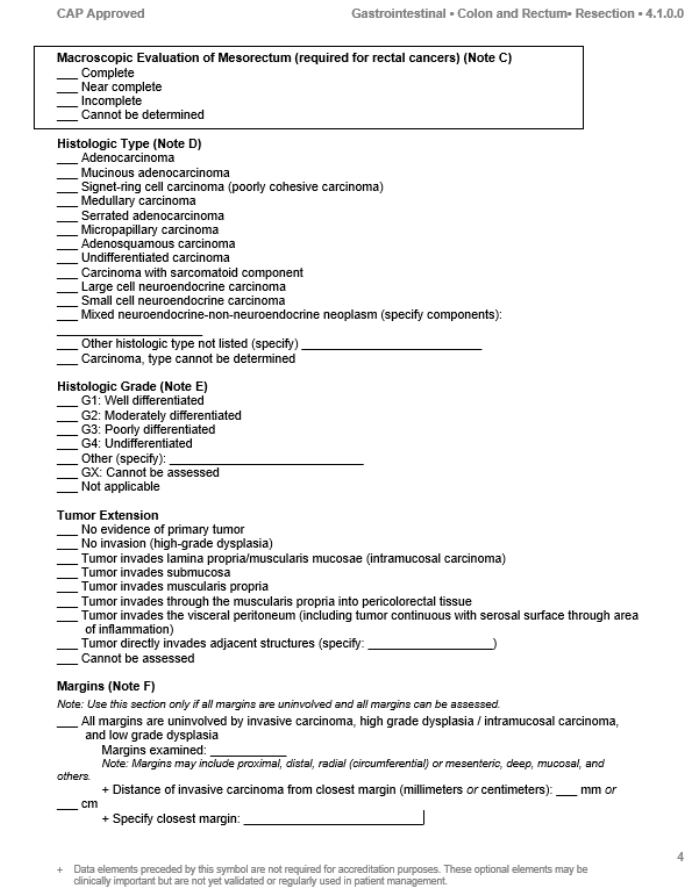
Each data element's value is "filled in" using a **pre-specified format** to ensure interoperability of information

- The information being sought is standardized
- The options for each variable are constrained to a pre-defined set of responses

Synoptic reports allow information to be easily collected, stored, and retrieved

Synoptic reporting has been used effectively

- **College of American Pathology synoptic reports** have been in use for some time
- Improved efficiency of documentation and standardized the language
- As surgeons, we have all reaped the benefits of this initiative



CAP Approved Gastrointestinal • Colon and Rectum• Resection • 4.1.0.0

Macroscopic Evaluation of Mesorectum (required for rectal cancers) (Note C)
___ Complete
___ Near complete
___ Incomplete
___ Cannot be determined

Histologic Type (Note D)
___ Adenocarcinoma
___ Mucinous adenocarcinoma
___ Signet-ring cell carcinoma (poorly cohesive carcinoma)
___ Medullary carcinoma
___ Serrated adenocarcinoma
___ Micropapillary carcinoma
___ Adenosquamous carcinoma
___ Undifferentiated carcinoma
___ Carcinoma with sarcomatoid component
___ Large cell neuroendocrine carcinoma
___ Small cell neuroendocrine carcinoma
___ Mixed neuroendocrine-non-neuroendocrine neoplasm (specify components): _____
___ Other histologic type not listed (specify) _____
___ Carcinoma, type cannot be determined

Histologic Grade (Note E)
___ G1: Well differentiated
___ G2: Moderately differentiated
___ G3: Poorly differentiated
___ G4: Undifferentiated
___ Other (specify): _____
___ GX: Cannot be assessed
___ Not applicable

Tumor Extension
___ No evidence of primary tumor
___ No invasion (high-grade dysplasia)
___ Tumor invades lamina propria/muscularis mucosae (intramucosal carcinoma)
___ Tumor invades submucosa
___ Tumor invades muscularis propria
___ Tumor invades through the muscularis propria into pericolorectal tissue
___ Tumor invades the visceral peritoneum (including tumor continuous with serosal surface through area of inflammation)
___ Tumor directly invades adjacent structures (specify: _____)
___ Cannot be assessed

Margins (Note F)
Note: Use this section only if all margins are uninvolved and all margins can be assessed.
___ All margins are uninvolved by invasive carcinoma, high grade dysplasia / intramucosal carcinoma, and low grade dysplasia
Margins examined: _____
Note: Margins may include proximal, distal, radial (circumferential) or mesenteric, deep, mucosal, and others.
+ Distance of invasive carcinoma from closest margin (millimeters *or* centimeters): ___ mm *or* ___ cm
+ Specify closest margin: _____

4

+ Data elements preceded by this symbol are not required for accreditation purposes. These optional elements may be clinically important but are not yet validated or regularly used in patient management.

https://www.facs.org/-/media/files/quality-programs/cancer/cssp/coc_standards_5_3_5_6_synoptic_operative_report_requirements.ashx

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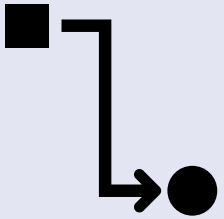
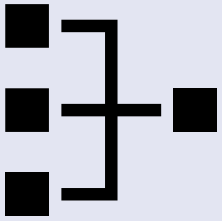
Why a transition to synoptic reporting?

Improves **accuracy** of documentation

Improves **efficiency** of data entry



Reduces variability in care



Improves quality of cancer care

https://www.facs.org/-/media/files/quality-programs/cancer/cssp/coc_standards_5_3_5_6_synoptic_operative_report_requirements.ashx

How will compliance with synoptic operative reporting be assessed?

- Compliance will be assessed based on seven randomly selected operative reports

- Each operative note must meet the technical requirements of the standard and have the **three required synoptic elements for Standard 5.6** (at right)

- Site reviewers will then select a rating for the standard based on whether the **threshold compliance level** (e.g. 70%, 80%) has been met

Element	Response Options
Operation performed with curative intent	Yes; No.
Tumor location *(select all that apply)*	Cecum; Ascending colon; Hepatic flexure; Transverse colon; Splenic flexure; Descending colon; Sigmoid colon; Rectosigmoid junction; Rectum, NOS; Colon, NOS.
Extent of colon and vascular resection *(select all that apply)*	Right hemicolectomy – ileocolic, right colic (if present); Extended right hemicolectomy – ileocolic, right colic (if present), middle colic; Transverse colectomy – middle colic; Splenic flexure resection – middle and ascending left colic; Left hemicolectomy – inferior mesenteric; Sigmoid resection – inferior mesenteric; Total abdominal colectomy – ileocolic, right colic (if present), middle colic, inferior mesenteric; Total abdominal colectomy, with proctectomy – ileocolic, right colic (if present), middle colic, inferior mesenteric, superior and middle rectal; Other *(with explanation)*.

https://www.facs.org/-/media/files/quality-programs/cancer/cssp/coc_standards_5_3_5_6_synoptic_operative_report_requirements.ashx

Current Options for Synoptic Operative Reporting

01

Create Institutional Synoptic Templates

- Use required elements and responses from the CoC 2020 Standards manual
- Can be done using smart phrases/smart tools to supplement a traditional narrative operative report

02

Use Commercial Options

- Tools developed by vendors that include CoC required elements and responses
- Current vendor list available on ACS website: Commercial Options

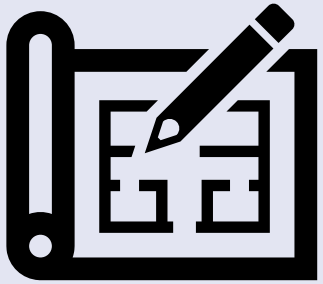
03

Download Fillable PDF Forms

- Available for download from Standards Resource Library in QPort
- Stop-gap measure to allow programs to ensure compliance with synoptic formatting requirements

CSSP Resources for Synoptic Operative Reporting

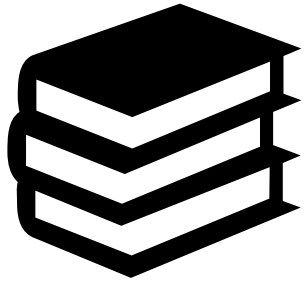
Operative Standards Toolkit



Up to date information on all standards, resources, and CSSP news

https://www.facs.org/quality-programs/cancer/cssp/resources/operative-standards-toolkit

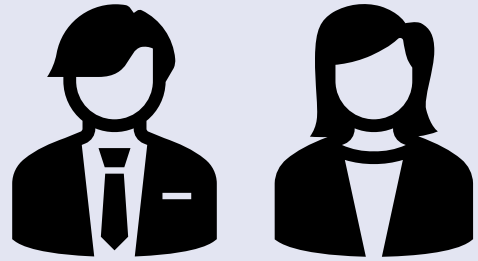
Quick Reference Guide



Composite of all required fields for synoptic reports

https://www.facs.org/-/media/files/quality-programs/cancer/cssp/coc_standards_5_3_5_6_synoptic_operative_report_requirements.ashx

Commercial Options



Vendors offering EMR-integrated tools to meet synoptic reporting requirements

https://www.facs.org/quality-programs/cancer/coc/standards/2020/operative-standards/commercial

Case eligibility and self-auditing

- All colon cancer resections performed for **colon cancer with curative intent** meet inclusion eligibility for Standard 5.6.

- **Self audits** are not required for compliance w/ CoC Operative Standards, however they are encouraged to:
  - Establish **baseline metrics**
  - Identify **gaps in compliance** *prior* to site visits

- Pull cases within the scope of the standards following the CSSP Case Identification Guidelines found online
- Evaluate operative reports for measures of compliance
- Plan and implement interventions to address any gaps in compliance

Educating surgeons and other specialists

- Physician education
  - Monthly section meetings; educating surgical leadership
  - Presentation at multidisciplinary tumor boards

- Disseminate amongst specialists treating colon cancer
  - Colorectal Surgery
  - Surgical Oncology
  - Minimally Invasive Surgery
  - General Surgery
  - Acute Care Surgery

Frequently Asked Questions (FAQs)

- **How does Standard 5.6 apply to colectomies performed on an emergent basis?**
  - Standard 5.6 applies to “all resections performed with curative intent for patients with colon cancer and applies to all approaches.”
  - An indication for emergent surgery does not necessarily preclude the performance of proximal vascular ligation and en bloc lymphadenectomy. If high ligation cannot be performed, it should be documented in the operative note.
- **If a neuroendocrine tumor occurs in the colon, does Standard 5.6 apply?**
  - Standard 5.6 applies to adenocarcinomas and not to neuroendocrine tumors.

Frequently Asked Questions (FAQs)

- **Do two colon primaries require two synoptic reports?**
  - If the surgeon performs one resection with two primary tumors, one set of synoptic elements/responses would be required. If two resections are performed for two primary tumors, two sets of synoptic elements/responses would be required.
- **For the "Extent of colon and vascular resection" data element, what should be documented if the resection that was performed does not correlate with any of the options listed?**
  - The focus of Standard 5.6 is on proximal vascular ligation at the origin of the primary feeding vessels. Surgeons can use the "Other" response any time the resection is not one of those described by the other response options and describe the extent of the colon and vascular resection as part of their explanation.

Panel Discussion/Q&A

Special thanks

Moderator:
Timothy J. Vreeland, MD, FACS

Panelists:
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David Dietz, MD, FACS
John Monson, MD, FACS
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Slides created by Anthony Villano, MD

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Questions? *cssp@facs.org*

Resources

ACS Cancer Surgery Standards Program (CSSP)

facs.org/cssp

Operative Standards Toolkit

facs.org/opstandardtoolkit

References

1) Le Voyer TE, Sigurdson ER, Hanlon AL, Mayer RJ, Macdonald JS, Catalano PJ, Haller DG. Colon cancer survival is associated with increasing number of lymph nodes analyzed: a secondary survey of intergroup trial INT-0089. J Clin Oncol. 2003 Aug 1;21(15):2912-9. doi: 10.1200/JCO.2003.05.062. PMID: 12885809.

2) Garcia B, Guzman C, Johnson C, Hellenthal NJ, Monie D, Monzon JR. Trends in lymph node excision and impact of positive lymph node ratio in patients with colectomy for primary colon adenocarcinoma: Population based study 1988 to 2011. Surg Oncol. 2016 Sep;25(3):158-63. doi: 10.1016/j.suronc.2016.05.013. Epub 2016 May 20. PMID: 27566017.

3) Katz M, et al. Operative Standards for Cancer Surgery. Available from: VitalSource Bookshelf, Wolters Kluwer Health, 2018.