

Implementation Strategies for Synoptic Operative Reporting

March 23, 2021 @ 6-7pm CT

Moderator



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Speakers



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Stanford University Medical Center
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Western Surgical Group
Chair, Commission on Cancer
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Mayo Clinic
Chair, CSSP Content Development
Committee

Why do we need the **Cancer Surgery Standards ?** PROGRAM

AMERICAN COLLEGE OF SURGEONS

Matthew H.G. Katz, MD, FACS
CSSP Chair



Why are operative standards important?

Adherence improves survival!

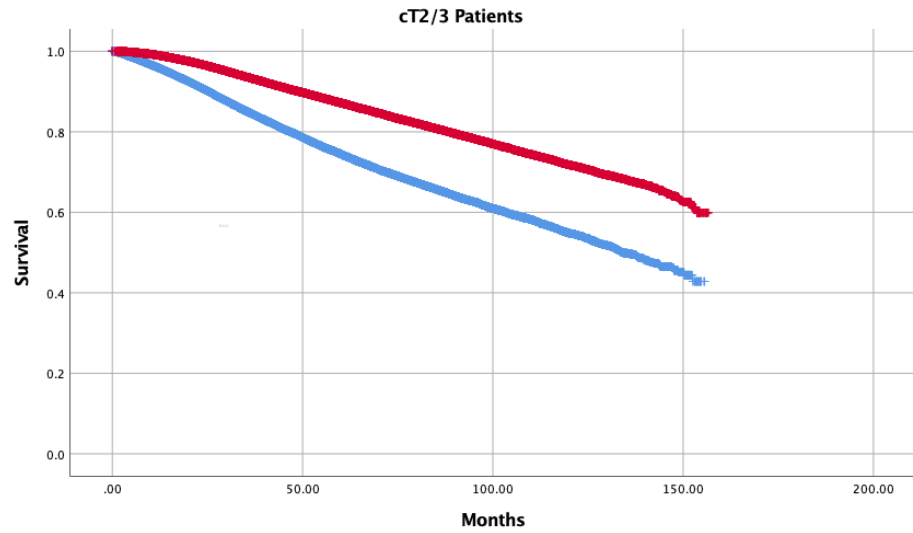
Standards:

- Resection margin status → R0 = meet standards
- Number of lymph nodes examined
 - ≥ 2 LNs for cT1 and cT2/3,
 - > 10 LNs for pN2/3
- Adjuvant therapy (chemotherapy, hormonal, and radiation) → any = meet standards

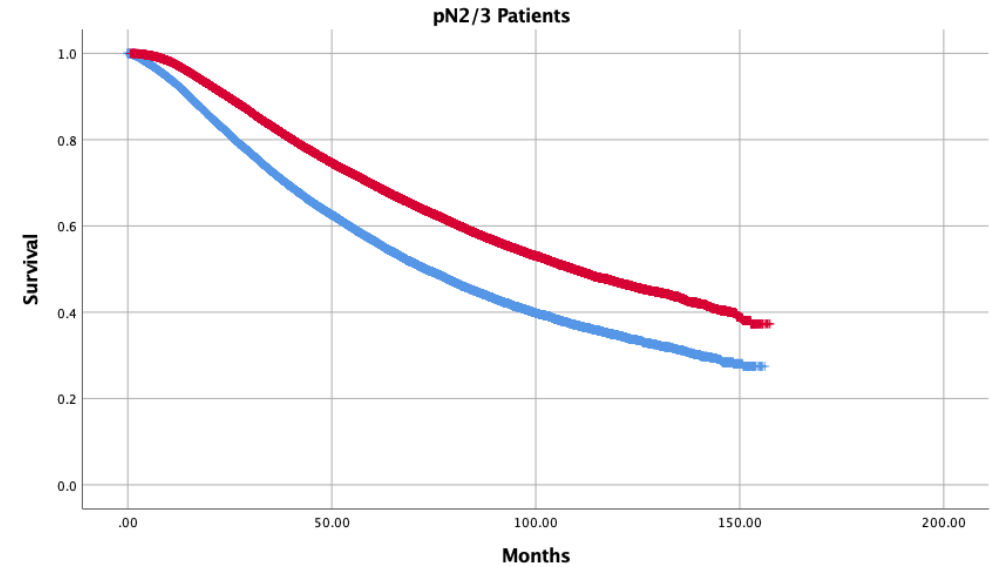
Minimal Standards	Number of cT1 Patients (%)	# of cT2/3 Patients (%)	# of pN2/3 Patients (%)
≥ 2 LNs Examined	360316 (74.0%)	189208 (78.0%)	-
> 10 LNs Examined	-	-	91310 (78.3%)

Zhao et al JSO 2019: 120:148-159

Adherence to surgical and oncologic standards improves survival in breast cancer patients



	+ Standards	-- Standards	p-Value
5-Year Overall Survival	0.872	0.745	<0.001 ^a
10-Year Overall Survival	0.718	0.548	



	+ Standards	-- Standards	p-Value
5-Year Overall Survival	0.696	0.567	<0.001 ^a
10-Year Overall Survival	0.469	0.347	
Median Overall Survival	109.34 mos	72.97 mos	

Zhao et al JSO 2019: 120:148-159

Purpose of the

**Cancer
Surgery
Standards**
PROGRAM
AMERICAN COLLEGE OF SURGEONS

Mission

To improve the quality of surgical care provided to people with cancer

Goals

- Collaborate with the ACS Cancer Research Program to **develop evidence-based standards** for the technical conduct of oncologic surgery
- **Create and disseminate tools** that support implementation and adherence to standards, including synoptic operative report templates for cancer surgery
- **Educate surgeons** on the technical conduct of oncologic surgery

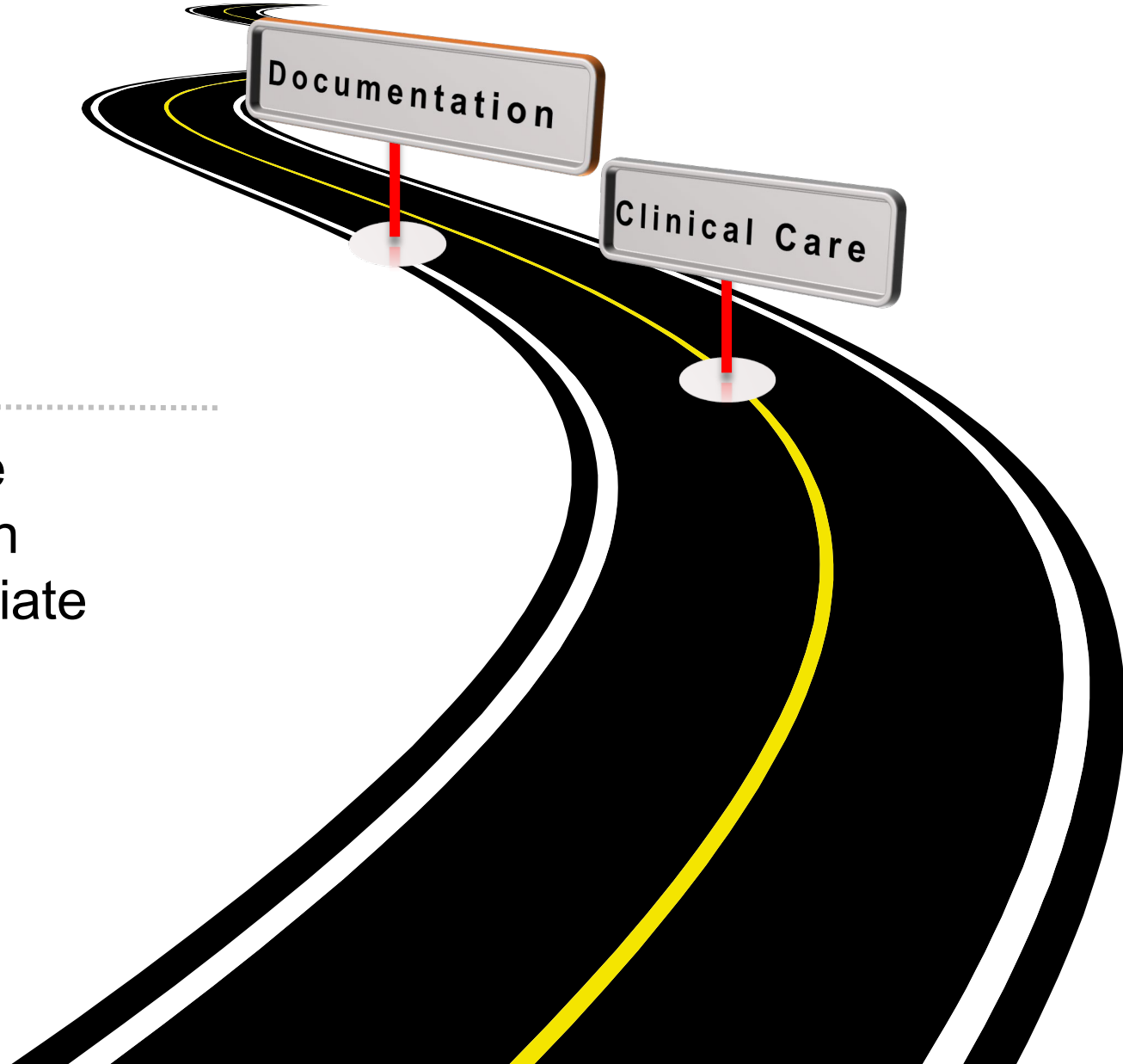


What is the value of synoptic reporting? The Big Picture

Kristan Staudenmayer, MD, FACS
CSSP Implementation & Integration Vice-Chair

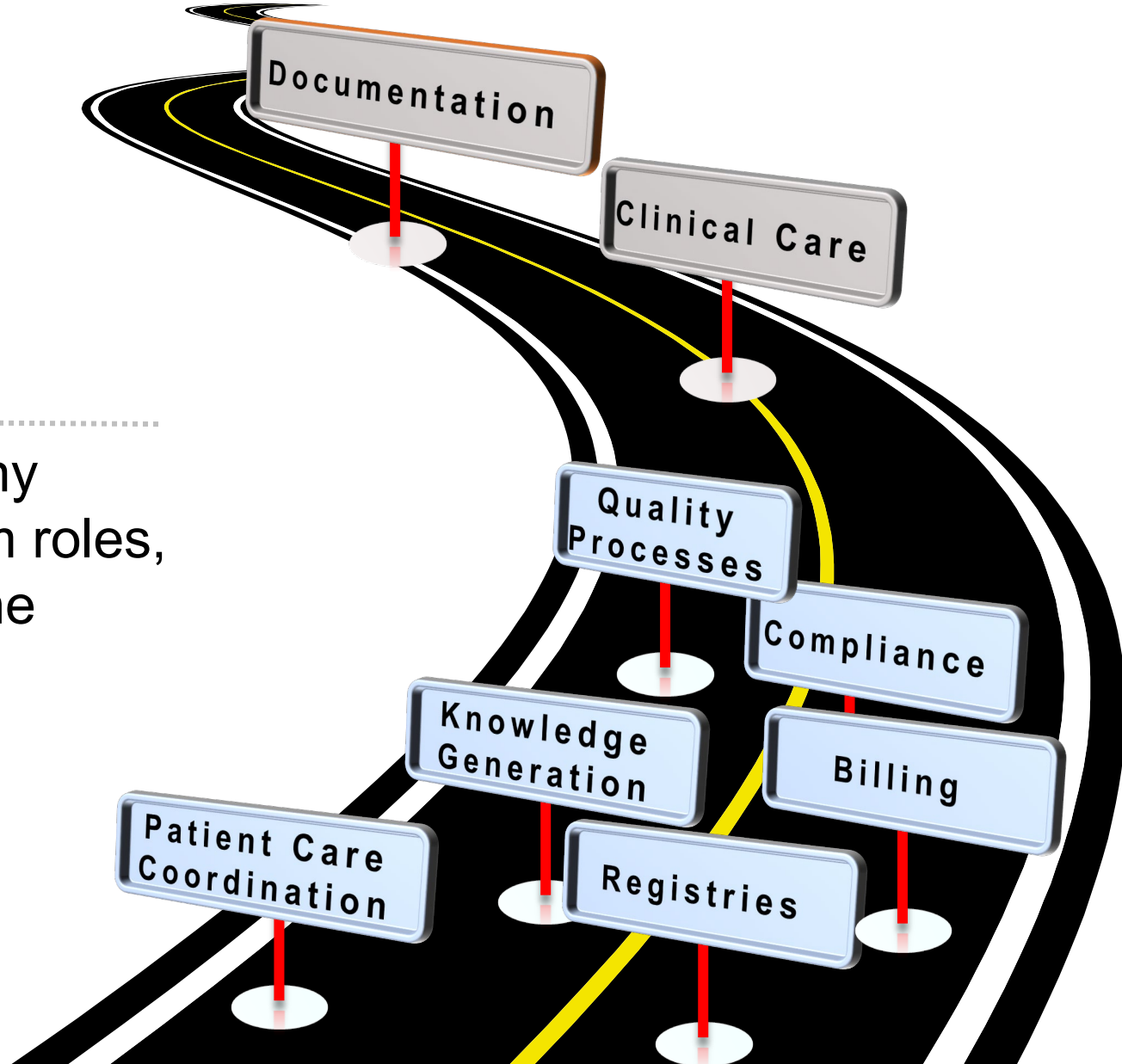
Documentation Considerations

We often focus on the **task** of documentation and having an immediate record to assist with postoperative care



Documentation Considerations

But records have many important downstream roles, each dependent on the quality of the original documentation



Why are synoptic operative reports important?

- Improve **accuracy** of documentation
- Improve **efficiency of entry**
- Improve **efficiency of data abstraction/measurement of compliance**
- Reinforce education: for example, can emphasize the “**critical elements**” of oncologic operations
- **Reduce variability** in care
- Improve **quality of cancer care**

What is the Evidence?

- TNM staging information can be missing in >50% of records.
- Within a single encounter, TNM staging may differ in different notes.
- Others, such as registrars, must sort through and interpret these narratives in order to glean the necessary information and then enter it manually to a registry leading to issues with quality and cost. The average cost for each of the National Program of Cancer Registries-funded registries is ***more than \$1 million per year.***

Synoptic v. Narrative Reports

Outcome or Subgroup	# Studies	N	Statistical Method	Effect Estimate – Synoptic v. Narrative
Efficiency				
Time to complete (min)	6	891	Mean Difference (95% CI)	-0.86 m [-1.17, -0.55]
Time to verified report in chart/ EPR (hours)	1	336	Mean Difference	-373.53 h
Quality				
Accuracy	1	208	Mean Difference (95% CI)	40.60% [38.54, 42.66]
Reduction Critical Error (% of op notes)	1	110	Mean Difference	32.13%
Reduction Error Rate (% of op notes)	1	110	Mean Difference	75.26%
Validity	1	208	Mean Difference (95% CI)	3.40% [2.02, 4.78]
Cost (\$/note)	2	72	Mean Difference	-\$8.27

Stogryn et al., 2019

Synoptic v. Narrative Reports

Currently we have a garbage-in/garbage-out problem that has direct impact on ***quality, delivery of care, and costs.***

Standardizing operative reports are a mechanism by which we can address it.



Stogryn et al., 2019

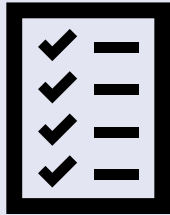
The future state of documentation

- The first digital evolution in healthcare involved the adoption of EHR systems
- Utilizing data from these systems has been limited by poor quality of information trapped differently within silos
- The next phase will involve standardization to facilitate interoperability of information which can lead to:
 - Advanced analytics
 - Greater availability for research
 - Ability for real-time data analysis, application of learning health system models
 - Facilitated downstream usage

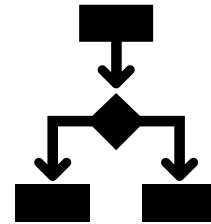
What are the synoptic reporting requirements for the CoC?

James Harris, MD, FACS
CoC Accreditation Committee Chair

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

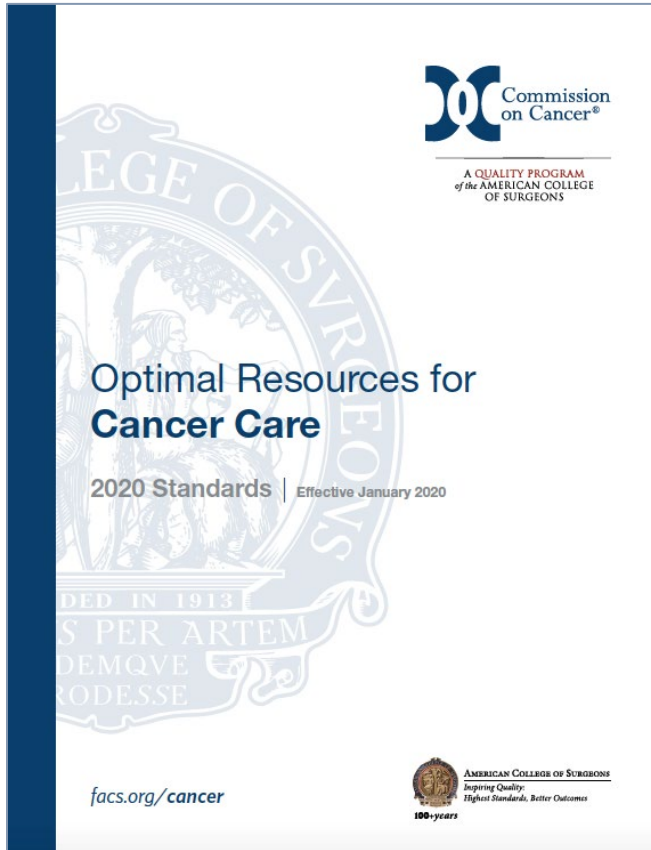


Synoptic reports allow information to be easily **collected, stored, and retrieved**

Synoptic operative reporting requirements for CoC accreditation

- **Operative reports** for patients undergoing the procedures covered by CoC Standards 5.3–5.6 must include **specific elements in synoptic format**, as outlined in the standards.
- Programs are welcome to use the ACS or their own synoptic operative reports as long as:
 - **Data elements** required to achieve compliance with the CoC standards are clearly identified
 - **Response options** are the same as in the CoC standard
- A **uniform synoptic reporting format** should be used by all surgeons at the facility.

Commission on Cancer Operative Standards



Standard	Disease Site	Procedure	Documentation
5.3	Breast	SLN biopsy	Operative reports
5.4	Breast	ALND	
5.5	Melanoma	WLE	
5.6	Colon	Colectomy	
5.7	Rectum	TME	Pathology reports (CAP)
5.8	Lung	Lung resection	

Standard 5.3: Sentinel Lymph Node Biopsy for Breast Cancer

Element	Response Options
Operation performed with curative intent.	Yes; No.
Tracer(s) used to identify sentinel nodes in the upfront surgery (non-neoadjuvant) setting (<i>select all that apply</i>).	Dye; Radioactive tracer; Superparamagnetic iron oxide; Other (<i>with explanation</i>); N/A.
Tracer(s) used to identify sentinel nodes in the neoadjuvant setting (<i>select all that apply</i>).	Dye; Radioactive tracer; Superparamagnetic iron oxide; Other (<i>with explanation</i>); N/A.
All nodes (colored or non-colored) present at the end of a dye-filled lymphatic channel were removed.	Yes; No (<i>with explanation</i>); N/A.
All significantly radioactive nodes were removed.	Yes; No (<i>with explanation</i>); N/A.
All palpably suspicious nodes were removed.	Yes; No (<i>with explanation</i>); N/A.
Biopsy-proven positive nodes marked with clips prior to chemotherapy were identified and removed.	Yes; No (<i>with explanation</i>); N/A.

Standard 5.4: Axillary Lymph Node Dissection for Breast Cancer

Element	Response Options
Operation performed with curative intent.	Yes; No.
Resection was performed within the boundaries of the axillary vein, chest wall (serratus anterior), and latissimus dorsi.	Yes; No (<i>with explanation</i>).
Nerves identified and preserved during dissection (<i>select all that apply</i>).	Long thoracic nerve; Thoracodorsal nerve; Branches of the intercostobrachial nerves; Other (<i>with explanation</i>).
Level III nodes were removed.	Yes (<i>with explanation</i>); No.

Standard 5.5: Wide Local Excision for Primary Cutaneous Melanoma

Element	Response Options
Operation performed with curative intent	Yes; No.
Original Breslow thickness of the lesion	Melanoma in situ (MIS); __ mm (<i>to the tenth of a millimeter</i>).
Clinical margin width (<i>measured from the edge of the lesion or the prior excision scar</i>)	0.5 cm; 1 cm; 2 cm; Other: __ cm due to cosmetic/anatomic concerns; Other (<i>with explanation</i>).
Depth of excision	Full-thickness skin/ subcutaneous tissue down to fascia (melanoma); Only skin and superficial subcutaneous fat (melanoma in situ); Other (<i>with explanation</i>).

Standard 5.6: Colon Resection

Element	Response Options
Operation performed with curative intent	Yes; No.
Tumor location	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	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 (<i>with explanation</i>).

Standards 5.3, 5.4, 5.5, 5.6



Compliance and Site Reviews

How can my CoC-accredited program meet these synoptic reporting requirements?

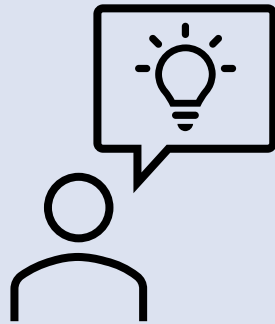
Tina J. Hieken, MD, FACS

CSSP Content Development Committee Chair

Options for Synoptic Operative Reporting – CoC Standards 5.3 through 5.6

Options currently available to CoC-accredited programs

Create Your Own Basic Templates

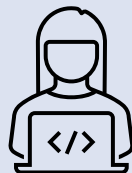


Use Third-Party Vendor Tools

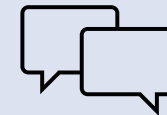


Options ahead

Build Complete Templates with ACS API



Request EMR-Integrated Templates



CURRENTLY AVAILABLE

Create Your Own Basic Templates

- Must include the elements and response options from the CoC 2020 Standards to demonstrate compliance
- No fees associated with use of the content in the manual for CoC-accredited cancer program

CoC Standard 5.4 Axillary Dissection for Breast Cancer

Element	Response Options
Operation performed with curative intent.	Yes; No.
Resection was performed within the boundaries of the axillary vein, chest wall (serratus anterior), and latissimus dorsi.	Yes; No (<i>with explanation</i>).
Nerves identified and preserved during dissection (<i>select all that apply</i>).	Long thoracic nerve; Thoracodorsal nerve; Branches of the intercostobrachial nerves; Other (<i>with explanation</i>).
Level III nodes were removed.	Yes (<i>with explanation</i>); No.

<https://www.facs.org/quality-programs/cancer/coc/standards/2020>

CURRENTLY AVAILABLE

Use Third-Party Vendor Tools

- CoC programs may opt to work with third-party vendors who have licensed synoptic operative reporting content from ACS
 - These electronic synoptic operative reporting solutions include ACS content and should allow CoC programs to meet compliance with the CoC standards
 - May include supplemental educational material (“Knowledge Platform”)
- Vendors are working with large EMR vendors to integrate tools in app store programs
 - Integration within the EMR and data functionality vary by vendor

Not owned or affiliated with the ACS. Contact vendors directly for pricing.

CURRENTLY AVAILABLE

Use Third-Party Vendor Tools

As of 3/23/2021, the vendors below have licensed synoptic operative reporting content from the ACS:

Across Healthcare, LLC

Application: [eDocSS.app \(electronic Documentation of Surgery Standards\)](#)

Email: info@edocss.app

mTuitive, Inc

Application: [mTuitive OpNote™](#)

Email: OpNote.acs@mtuitive.com

The screenshot shows the ACS website header with the logo and tagline 'Inspiring Quality: Highest Standards, Better Outcomes'. The navigation menu includes COVID-19, Member Services, Quality Programs, Education, Advocacy, Publications, and About ACS. The breadcrumb trail reads: American College of Surgeons > Quality Programs > Commission on Cancer 2020 Operative Standards > Commercial Options for Synoptic Operative Reporting. The main content area features the Commission on Cancer logo and the title 'Commercial Options for Synoptic Operative Reporting'. The text explains that CoC-accredited cancer programs can use third-party vendors for synoptic operative reporting. It lists two vendors: Across Healthcare, LLC (Application: eDocSS.app, Email: info@edocss.app) and mTuitive, Inc (Application: mTuitive OpNote™, Email: OpNote.acs@mtuitive.com). A sidebar on the left contains links for Commission on Cancer 2020 Operative Standards, Commercial Options for Synoptic Operative Reporting, Timeline and Compliance Information, and Implementation Options.

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

IN DEVELOPMENT

Build Complete Templates with ACS API

```
"title": "Breast Synoptic Operative Report",
"pages": [
  {
    "title": "EMR Autopopulated Information",
    "notesLink": "Note A.pdf",
    "elements": [
      {
        "type": "text",
        "title": "Patient Name"
      },
      {
        "type": "text",
        "title": "MRN"
      },
      {
        "type": "text",
        "title": "Date of Surgery"
      },
      {
        "type": "text",
        "title": "Name of Surgeon"
      },
      {
        "type": "text"
      }
    ]
  }
]
```

API = Application Programming Interface

- Provides content, formatting, & logic model of the ACS templates
- Allows local IT to build a synoptic reporting tool into their EMR software
- Choose how much content to incorporate

Comprehensive list of data fields including CoC-required elements

- Potentially replaces narrative reports
- Meets common surgical reporting requirements
- Includes supplemental educational material (“Knowledge Platform”)

Access additional disease-site SORs as released by ACS

EMR-Integrated Templates

- ACS is having ongoing discussions with EMR vendors about integrating CSSP templates directly into the EMR
- CoC-accredited programs interested in this option should express their interest in having this functionality within the EMR to their EMR representative

Options for Synoptic Operative Reporting – CoC Standards 5.3 through 5.6

CURRENTLY AVAILABLE

Create Your Own Basic Templates

User-created template including only limited CoC-required data elements for Standards 5.3–5.6

- Must include elements and response options listed in CoC Standards 5.3–5.6 to demonstrate compliance
- No fees associated with using CoC content

Use Third-Party Vendor Tools

Fully functional tool available via EMR application marketplaces

- Comprehensive list of data fields, including elements required for CoC accreditation
- Vendor supports installation & provides tech support
- Automatically access additional disease-sites as released by ACS
- May include supplemental educational material (“Knowledge Platform”)

Contact ACS licensed vendors directly for pricing.
Visit [Commercial Options](#) webpage for contact information.

IN DEVELOPMENT

Build Complete Templates with ACS API

Local IT uses the ACS Application Programming Interface (API) to build ACS templates into your EMR system

- Comprehensive list of data fields including elements required for CoC accreditation; can potentially replace narrative reports
- Provides content, formatting, & logic model from ACS templates
- Meets common surgical reporting requirements
- Has supplemental educational material (“Knowledge Platform”)
- Add new disease-sites as released by ACS
- Nominal fee for API access

Request EMR-Integrated Templates

EMR companies integrate ACS templates directly into their systems

- Integration into EMR systems should allow for seamless access by EMR users. This option is currently not available.
- Please contact your institution’s EMR representative to express your interest in having this functionality within your EMR.

Questions?

