CoC Operative Standards Overview

Speaker Name
Event
Date
Overview

• What are operative standards and why are they important?
• What are the CoC Operative Standards?
• What is synoptic reporting?
• When/how should we implement the CoC Operative Standards?
• What resources can help my program implement the CoC Operative Standards?
What are Operative Standards?
What are Standards?

- **Standard** = Repeatable, harmonized, agreed-upon, and documented way of doing something

- Standards contain precise criteria designed to be used consistently as a rule, guideline, or definition.
  - Why? Simplify and increase reliability & effectiveness

- Result from collective work by experts in a field and provide consensus
Impact of Standards on Oncologic Outcomes

• Improvements in compliance with evidence-based guidelines may result in:
  
  ✓ Reduced health care costs
  ✓ Reduced hospital length of stay and complications
  ✓ Improved long-term outcomes
  ✓ Increased patient satisfaction

Why are Surgery Standards different?

• First time the **conduct of the surgery** is being scrutinized by CoC standards

• Many surgeons have **limited/no experience** with CoC standards and, therefore, **little knowledge** of the standards

• Imperative that we get buy in from surgeons for these standards
What are the CoC Operative Standards?
# The CoC Operative Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Disease Site</th>
<th>Procedure</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.3</td>
<td>Breast</td>
<td>Sentinel node biopsy</td>
<td>Operative report</td>
</tr>
<tr>
<td>5.4</td>
<td>Breast</td>
<td>Axillary dissection</td>
<td>Operative report</td>
</tr>
<tr>
<td>5.5</td>
<td>Melanoma</td>
<td>Wide local excision</td>
<td>Operative report</td>
</tr>
<tr>
<td>5.6</td>
<td>Colon</td>
<td>Colectomy (any)</td>
<td>Operative report</td>
</tr>
<tr>
<td>5.7</td>
<td>Rectum</td>
<td>Mid/low resection (TME)</td>
<td>Pathology report (CAP)</td>
</tr>
<tr>
<td>5.8</td>
<td>Lung</td>
<td>Lung resection (any)</td>
<td>Pathology report (CAP)</td>
</tr>
</tbody>
</table>
Requirements for Compliance

Programs must (1) fulfill specific technical requirements AND (2) report relevant data items in synoptic format.

Standards 5.3–5.6 include requirements for operative reports.

- The required elements and responses (as shown in the 2020 Standards) must be in the operative note in a distinct section.

Standards 5.7 & 5.8 include requirements for pathology reports.

- Pathologists must use cancer protocol templates developed by the College of American Pathologists (CAP) for rectal and lung resection (already required by Standard 5.1)
Standard 5.3: Sentinel Lymph Node Biopsy for Breast Cancer

Measures of Compliance

1. All sentinel nodes for breast cancer are identified using tracers or palpation, removed, and subjected to pathologic analysis.

2. Operative reports for sentinel node biopsies for breast cancer document the required elements in synoptic format.

If both requirements are met, the case is compliant.
Standard 5.4: Axillary Lymph Node Dissection for Breast Cancer

Measures of Compliance

1. Axillary lymph node dissections for breast cancer include **removal of level I and II lymph nodes** within an anatomic triangle comprised of the axillary vein, chest wall (serratus anterior), and latissimus dorsi, with **preservation of the main nerves** in the axilla.

2. Operative reports for axillary lymph node dissections for breast cancer **document the required elements** in synoptic format.

<table>
<thead>
<tr>
<th>Element</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation performed with curative intent.</td>
<td>Yes; No.</td>
</tr>
<tr>
<td>Resection was performed within the boundaries of the axillary vein, chest wall (serratus anterior), and latissimus dorsi.</td>
<td>Yes; No (with explanation).</td>
</tr>
<tr>
<td>Nerves identified and preserved during dissection (select all that apply).</td>
<td>Long thoracic nerve; Thoracodorsal nerve; Branches of the intercostobrachial nerves; Other (with explanation).</td>
</tr>
<tr>
<td>Level III nodes were removed.</td>
<td>Yes (with explanation); No.</td>
</tr>
</tbody>
</table>
Standard 5.5: Wide Local Excision for Primary Cutaneous Melanoma

Measures of Compliance

1. Wide local excisions for melanoma include the skin and all underlying subcutaneous tissue down to the fascia (for invasive melanoma) or the skin and the superficial subcutaneous fat (for in situ disease). Clinical margin width is selected based on original Breslow thickness:
   - 1 cm for invasive melanomas less than 1 mm thick.
   - 1 to 2 cm for invasive melanomas 1 to 2 mm thick.
   - 2 cm for invasive melanomas greater than 2 mm thick.
   - At least 5 mm for melanoma in situ.

2. Operative reports for wide local excisions of primary cutaneous melanomas document the required elements in synoptic format.

<table>
<thead>
<tr>
<th>Element</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation performed with curative intent</td>
<td>Yes; No.</td>
</tr>
<tr>
<td>Original Breslow thickness of the lesion</td>
<td>Melanoma in situ (MIS); __. __ mm (to the tenth of a millimeter).</td>
</tr>
<tr>
<td>Clinical margin width (measured from the edge of the lesion or the prior excision scar)</td>
<td>0.5 cm; 1 cm; 2 cm; Other: ___ cm due to cosmetic/anatomic concerns; Other (with explanation).</td>
</tr>
<tr>
<td>Depth of excision</td>
<td>Full-thickness skin/subcutaneous tissue down to fascia (melanoma); Only skin and superficial subcutaneous fat (melanoma in situ); Other (with explanation).</td>
</tr>
</tbody>
</table>
Standard 5.6: Colon Resection

Measures of Compliance

1. Resection of the tumor-bearing bowel segment and complete lymphadenectomy is performed en bloc with proximal vascular ligation at the origin of the primary feeding vessel(s).

2. Operative reports for resections for colon cancer document the required elements in synoptic format.
Standards 5.7 & 5.8

**Standard 5.7: Total Mesorectal Excision**

**Measures of Compliance**

1. Total mesorectal excision is performed for patients undergoing radical surgical resections of mid & low rectal cancers, resulting in complete or near-complete total mesorectal excision.

2. Pathology reports for resections of rectal adenocarcinoma document the quality of TME resection in synoptic format.

**Standard 5.8: Pulmonary Resection**

**Measures of Compliance**

1. Pulmonary resections for primary lung malignancy include lymph nodes from at least one (named and/or numbered) hilar station and at least three distinct (named and/or numbered) mediastinal stations.

2. Pathology reports for curative pulmonary resection document the nodal stations examined by the pathologist in synoptic format.
What is Synoptic Reporting?
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
Narrative Reporting vs. Synoptic Reporting

**Narrative reporting…**
- May be constructed using pre-determined data fields and pre-determined responses
- Constructed by dictation, free text, smarttext, etc.
- May use standardized terminology
- Presented in a **prose** format
- Prone to **omission** of necessary data and **inconsistencies** in language and formatting
- May allow for discrete data capture

**Synoptic reporting…**
- **Always** constructed using pre-determined data fields and pre-determined responses
- Typically created using a **tool**
- **Always** uses standardized terminology
- Presented in **checklist** format
- **Always** allows for discrete data capture
  - Information is formatted so it can be collected, stored, and is easily retrievable for data repositories
  - Can automatically populate data from the EHR

A note may (ideally?) be a combination of the two!

Accuracy of Pathology Reports – Systematic Review

Shoe on the other foot…

Narrative Path Report

- Diagram courtesy of Cancer Care Ontario
- Slide courtesy of Samantha Spencer, MD

CAP Synoptic Report

- Specimen type: left modified radical mastectomy
- Tumour site: left outer upper quadrant
- Tumour size: 3 x 2 x 1 cm
- Histologic type: ductal, NOS
- Histologic grade: 2/3 (modified SBR)
  - tubules: 2/3;
  - nuclei: 2/3;
  - mitoses: 2/3
- Margins: uninvolved by invasive carcinoma
- Distance to closest margin: 1 cm to deep margin
- Number of nodes examined: 9
- Number of nodes involved: 1
## Synoptic vs. Narrative Reports

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

What is the value of Synoptic Operative Reporting?

• Improve accuracy of documentation
• Improve efficiency of data entry and data abstraction
• Reinforce education (can emphasize the critical elements of oncologic operations)
• Reduce variability in care
• Improve quality of cancer care
When/How Should We Implement the CoC Operative Standards?
Communicate requirements & engage clinicians in implementation plans

Measure compliance with synoptic pathology reports and assure high reliability for future site visits

Site Visits review 2021 pathology reports for 70% compliance

Site Visits review 2021 & 2022 pathology reports for 80% compliance

Site Visits review 2021, 2022, and 2023 pathology reports for 80% compliance

Steps to Achieve Compliance
Site Visit Process

- Programs generate list of eligible cases
- Site reviewers select 7 cases to assess for each standard
- Programs confirm case eligibility for selected cases
- Site reviewers assess each case for all measures of compliance
- Site reviewers select a rating for each standard based on whether the threshold compliance level has been met
Timeline for Standards 5.3-5.6

**Introduction of operative standards**
- 2020

**Plan for implementation, educate/train surgeons & registrars**
- 2021

**Document final plan for implementation and conduct audits**
- 2022

**Begin compliance with Standards 5.3-5.6**
- 2023

**Site Visits review documentation of final plans for compliance**
- 2023

**Site Visits review 2023 operative reports for 70% compliance**
- 2024

**Site Visits review 2023 & 2024 operative reports for 80% compliance**
- 2025

**Steps to Achieve Compliance**
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
Checklist for CoC Programs in 2022

- Conduct self-audits to assess compliance levels (*recommended*)
- **Document formal plans** for how your program will implement synoptic operative reporting starting Jan 1, 2023
- Implement synoptic operative reporting in preparation for Standards 5.3–5.6
- Ensure CAP synoptic pathology reports are in use for rectal cancer and lung cancer cases (Standards 5.7 & 5.8)
- Prepare for site visits *(if your program is being reviewed in 2022)*
What Resources are Available to Help My Program?
## Educating Programs About the CoC Operative Standards & Requirements

<table>
<thead>
<tr>
<th>Brief videos</th>
<th>Webinars</th>
<th>Visual abstracts</th>
<th>Additional resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Introduction to the Operative Standards</td>
<td>• Requirements for CoC Standards 5.7, 5.8, 5.3, 5.4, and 5.5</td>
<td>• Standard 5.7</td>
<td>• Comprehensive FAQ document with questions from webinars, CAnswer Forum, etc.</td>
</tr>
<tr>
<td>• CoC Standards 5.7 and 5.8</td>
<td>• Implementation Strategies for Synoptic Operative Reporting</td>
<td>• Standard 5.8</td>
<td>• Operative Standards Toolkit</td>
</tr>
<tr>
<td>• Synoptic vs. Narrative Reporting</td>
<td>• Best Practices for Compliance with CoC Standards 5.7 &amp; 5.8</td>
<td>• Standard 5.3</td>
<td></td>
</tr>
<tr>
<td>• Synoptic Operative Reporting Roadmap</td>
<td>• 2022 Site Visit Preparation for 5.7 &amp; 5.8</td>
<td>• Standard 5.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Implementation of the CoC Operative Standards</td>
<td>• Synoptic reporting for Standards 5.3-5.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Site visit process</td>
<td></td>
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</tbody>
</table>

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Visual abstracts

**Standard 5.7: Total Mesorectal Excision**

**Operation**
- Total mesorectal excision (TME) is performed for mid and low rectal tumors, resulting in complete or near-complete TME.
- Keep fascic propria of rectum intact, operate in plane between rectum and presacral fascia.
- Ensure negative margins.
- Protects neurovascular structures.

**Pathology Documentation**
- Quality of TME documented in synoptic report.

**When?**
- 2021 Implementation
- 2022 site visits: 70% Compliance

**Standard 5.8: Pulmonary Resection**

**Operation**
- For any primary pulmonary resection performed with curative intent (including non-metastatic peripherally-located resections).
- Resect nodes from:
  - Middle (stations 2-9)
  - Intermediate stations
  - Hilum (stations 10-14)
  - Station 1

**Pathology Documentation**
- Synoptic report documents lymph nodes from:
- 3 mediastinal stations
- 1 hilar station

**When?**
- 2021 Implementation
- 2022 site visits: 70% Compliance

**Standard 5.3: Sentinel Node Biopsy for Breast Cancer**

**Operation**
- For nodal staging operations performed with curative intent for patients with breast cancers of epithelial origin.
- Remove nodes that are:
  - Radioactive
  - Dye stained
  - Present at the end of dye-filled lymphatic.
  - Probable suspicious
  - Clipped.

**Pathology Documentation**
- All sentinel nodes must be identified, removed, and submitted to pathologic analysis.

**Timeline**
- 2022 Document final plan for implementation.
- 2023 Standard 5.3 takes full effect.
- 2024 Site visits begin reviewing operative reports.

**Standard 5.4: Axillary Lymph Node Dissection for Breast Cancer**

**Operation**
- For all axillary lymph node dissections performed with curative intent for patients with breast cancers of epithelial origin.
- Remove level I and II lymph nodes within:
  - Axillary vein
  - Latissimus dorsi
  - Serratus anterior (chest wall)

**Pathology Documentation**
- Preserve long thoracic, thoracodorsal, & intercostobrachial nerves when possible.

**Timeline**
- 2023 Document final plan for implementation.
- 2024 Site visits begin reviewing operative reports.

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Visual abstracts

Commission on Cancer Operative Standards

Compliance Requirements & Site Visit Process Overview

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Review Process</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>A reviewed case must meet both the technical requirement AND the synoptic documentation requirement to be compliant</td>
<td>Programs generate list of eligible cases. Site reviewers select 7 cases to assess for each standard. Programs confirm case eligibility for selected cases. Site reviewers assess each case for all measures of compliance. Site reviewers select a rating for each standard based on whether the threshold compliance level has been met.</td>
<td>2021 Standards 5.7 &amp; 5.8 take effect. Site visits begin reviewing pathology reports. 2023 Standards 5.3-5.6 take effect. Site visits begin reviewing operative reports.</td>
</tr>
</tbody>
</table>

For more compliance information, visit facs.org/opstandardscompliance

Commission on Cancer Operative Standards 2020

Synoptic Operative Reports: CoC Standards 5.3-5.6

<table>
<thead>
<tr>
<th>Definition</th>
<th>Benefits</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized sets of data elements organized as a structured checklist or template</td>
<td>Allow information to be easily collected, stored, and retrieved, resulting in:</td>
<td>2022 Programs document final plan for implementation. 2023 Operative reports must meet technical &amp; synoptic formatting requirements. 2024 Site visits assess 2023 reports for 70% compliance.</td>
</tr>
<tr>
<td>Each data element’s value is filled in using a pre-specified format</td>
<td>Accuracy. Efficiency of entry. Efficiency of data abstraction. Variability. Costs.  ... thereby increasing the quality of cancer care.</td>
<td></td>
</tr>
</tbody>
</table>
Operative Standards Toolkit

All resources can be found on the Operative Standards Toolkit, organized by topic.

facs.org/opstandardtoolkit
Questions? cssp@facs.org

General Resources

Optimal Resources for Cancer Care (2020 Standards)
facs.org/quality-programs/cancer/coc/standards/2020

CoC Operative Standards
facs.org/quality-programs/cancer/coc/standards/2020/operative-standards

Operative Standards Toolkit
facs.org/opstandardtoolkit

Operative Standards for Cancer Surgery (OSCS) Manuals
facs.org/oscs

ACS Cancer Surgery Standards Program (CSSP)
facs.org/cssp