

# CANCER SURGERY CHECKLISTS: A TOOL TO IMPROVE PATIENT CARE

## INTRODUCTION

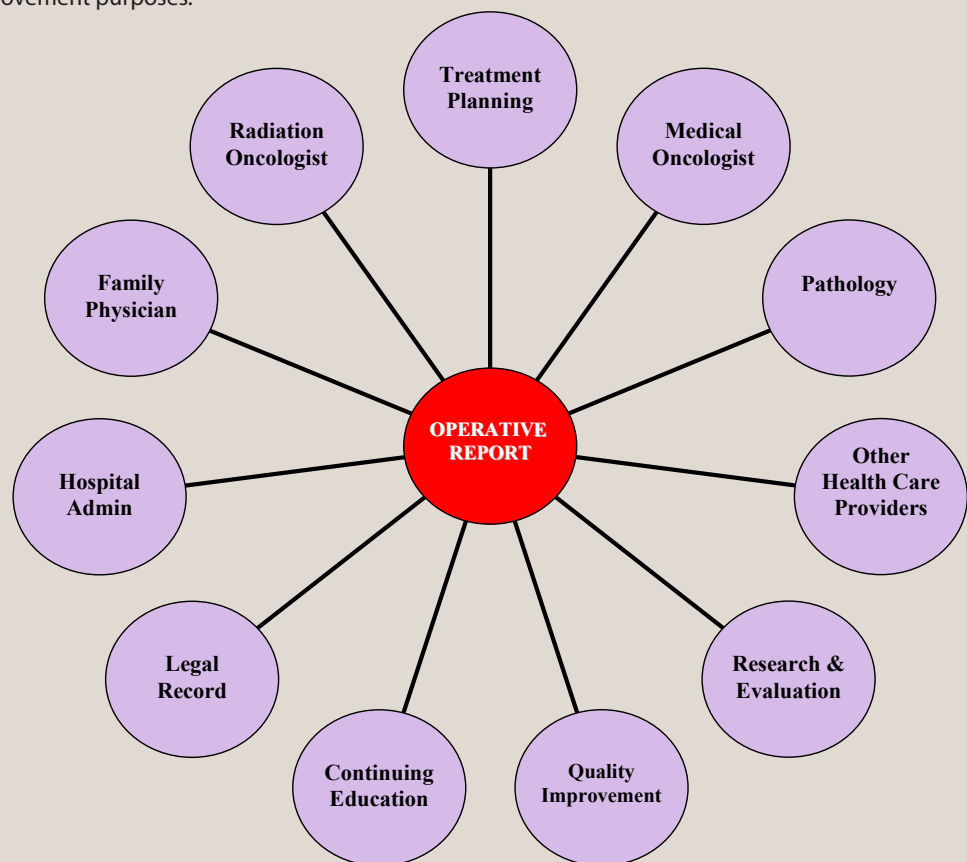
The Surgical Oncology Network (SON) was established in 2001 by the BC Cancer Agency and is now the leading advisory and resource body for surgical oncology in the province. By engaging cancer surgery care providers, and developing partnerships and collaborations provincially and nationally, the SON promotes and advances continuous quality improvement to ensure the best possible outcomes for all cancer surgery patients in BC.

Surgery plays a critical role in the diagnosis, staging and treatment of cancer and remains the primary treatment for many solid tumours. More than half of patients diagnosed with cancer will require some form of surgical procedure during the course of their illness, and surgery is frequently the gateway into services provided by the Agency.

The SON has made cancer surgery checklists (also known as synoptic operative reports) a priority as part of its strategic plan and has developed a standardized process to establish tumour site specific datasets critical for the optimal management of cancer patients. These checklists will be used by surgeons when dictating their operative reports and will inform the future development of an electronic synoptic reporting system.

## BACKGROUND

An operative report is a descriptive account of the surgical procedure, suspected or confirmed findings, and proposed treatment dictated by the surgeon in a narrative form. They are the official medical and legal documentation of an operation and provide information for decision making and treatment planning by other health care providers. Data from the operative reports is also used for research and quality improvement purposes.



Uses of the Operative Report

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# CANCER SURGERY CHECKLISTS

## DRAWBACKS TO NARRATIVE OPERATIVE REPORTS

Research has demonstrated that narrative reporting does not consistently provide all the information required to make optimal treatment planning decisions.

- Critical information is recorded only 33% to 50% of the time.
- Insufficient detail for treatment planning.
- Lack of standardized format does not promote best practices.
- Significant variation in style and content between surgeons.
- Data not easily accessed and difficult to extract for research and quality improvement studies.
- Do not provide surgical residents with a training tool to guide their dictation.

Name: Ms. Fictional Patient  
Admitted: Sept 25, 2011  
DOB: Jan 3, 1975  
PHN:72940

**Preoperative Diagnosis:** Left Breast Cancer

**Post operative Diagnosis:** Same

**Procedure:** left partial mastectomy and ALND.

With the patient in the supine position, the left breast and axilla were prepped and draped. An incision was made over the mass and the mass was excised using electrocautery. The specimen was sent to pathology. Hemostasis was assured and the skin was closed with staples. An incision was then made in the axilla and flaps were raised. The dissection was then completed removing the axillary contents and preserving the neurovascular structures in the usual fashion. The tissue was sent to pathology. A JP drain was placed and the wound closed with staples. Dressings were applied and she was transferred to recovery in stable condition. Sponge and instrument counts were correct at the end of the case.

Sample **Narrative** Breast Cancer Operative Report

*Most surgeons remember the first time they performed a full surgery and the daunting task of dictating the operative report. With little or no instruction, we all struggled to remember exactly what we did and what important information to include. Often, a 20-minute appendectomy turned into a 40-minute dictation.*

Dr. Carl Brown, Chair, SON Research & Outcomes Committee  
Specialist in General & Colorectal Surgery, St. Paul's Hospital

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**Preoperative Diagnosis:** Left Breast Cancer

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**Procedure:** left partial mastectomy and ALND.

- 1. Indication:** Primary treatment
- 2. Preop Biopsy:** Core by radiology
- 3. Preop Diagnosis:** Invasive carcinoma
- 4. Preop Stage:** 2cm tumour left breast with nodes clinically positive
- 5. Neoadjuvant Therapy:** None
- 6. Breast Procedure:** Partial mastectomy
- 7. Indication for Total Mastectomy:** Not applicable, BCS done
- 8. Reconstruction:** Not applicable, BCS done
- 9. Localization:** Palpable
- 10. Incision:** Over tumour
- 11. Intraoperative Confirmation of Lesion Removal:** Yes, by palpation
- 12. Clips Marking Site:** Yes
- 13. Specimen Orientation:** Yes
- 14. Additional Margin Tissue Taken:** Yes, superior and medial
- 15. Pectoral Fascia Removed:** Yes
- 16. Anterior Breast Tissue Remaining:** No, skin remaining
- 17. Additional Notes on Breast Procedure:** No more medial tissue
- 18. Axillary Procedure:** ALND
- 19. Axillary Incision Location:** Axillary skin crease incision
- 20. Sentinel Node Technique:** Not applicable
- 21. Internal Mammary Radioactivity:** Not applicable
- 22. Number of Submitted Sentinel Nodes:** Not applicable
- 23. Indication for ALND:** Preop positive lymph node
- 24. Structures Identified and Preserved:** Long thoracic, thoracodorsal, medial pectoral and 2 intracostal brachial nerves
- 25. Additional Notes on Axillary Surgery:** None
- 26. Unplanned Events/Complications:** None
- 27. Drain:** No
- 28. Closure:** Skin closure breast and axilla with subcuticular stitch

**FOLLOW-UP:** The patient will return to the office to review results in 2 weeks and then will be referred for adjuvant treatment.

Sample **Checklist** Breast Cancer Operative Report

## CANCER SURGERY CHECKLIST

Also known as a synoptic operative report, a cancer surgery checklist is a structured, standardized list of data items with a pre-specified choice of responses that concisely and comprehensively records key elements related to the tumour and operative procedure.

This concept has been pioneered in pathology, where synoptic summaries have been advocated by the College of American Pathologists (CAP) since the early 1990s.

A checklist is more comprehensive and precise, capturing essential data elements clearly and reliably in the operative report.

## STANDARDIZED CHECKLISTS:

- Increase the consistency, accuracy and completeness of clinical information.
- Improve the process of patient care by ensuring all relevant information is captured to guide optimal treatment planning.
- Incorporate quality standards and best practice guidelines.
- Facilitate data collection for quality reporting and quality improvement.

# DEVELOPMENT PROCESS FOR CANCER SURGERY CHECKLISTS

The Surgical Oncology Network has established a standardized process for developing cancer surgery checklists, based on a modified Delphi method (an iterative process to reach consensus using data collection, analysis and expert feedback). This process was used to develop the Breast Cancer, Rectal Cancer and now the Endocrine Neck Surgery Checklists. The process is outlined as follows:

## 1. ESTABLISH AND ENGAGE A TEAM OF CONTENT EXPERTS

- SON Surgical Tumour Group (i.e. Breast, Colorectal, Endocrine) and medical and radiation oncologists.
- Content experts selected based on expertise, competence and higher volumes of cancer patients.
- Experts from all Health Authorities included.

## 2. APPOINT A CLINICAL PROJECT LEAD

- Surgical leads selected based on high volumes of cancer procedures, respect within surgical community, multidisciplinary practice, leadership skills and dedication.
- Dr. Elaine McKeivitt (Breast Cancer Checklist), Dr. Carl Brown (Rectal Cancer Checklist), and Dr. Sam Wiseman (Endocrine Neck Surgery Checklist).

## 3. IDENTIFY A PRELIMINARY LIST OF DATA ELEMENTS

- Based on best practices, guidelines and standards.

## 4. REACH CONSENSUS AMONG THE TEAM OF EXPERTS

- Through face-to-face meetings and email discussions.

## 5. PILOT TEST LIST OF DATA ELEMENTS

- Each list was trialled for feasibility by surgeons and was further refined in accordance with their feedback.

## 6. CONDUCT A PROVINCE WIDE SURVEY OF SURGEONS TO SOLICIT FEEDBACK, VALIDATE THE CHECKLIST AND ENGAGE SURGEONS IN THE PROCESS

- For each checklist, a survey of data elements was developed using a 1 to 5 Likert scale to assess the level of agreement for each data element.
- Electronic and print surveys were piloted then circulated to surgeons across BC who perform breast/rectal/endocrine cancer procedures in their practice. All Health Authorities were represented.
- Surgeons were identified using the SON Surgeon Directory, an in-house database of surgeons' contact information and practice interests.
- A modified Dillman approach was used.

## 7. OBTAIN MULTIDISCIPLINARY INPUT

- Surveys were also completed by medical and radiation oncologists.
- Checklists were presented for discussion at the BCCA Provincial Breast and GI Tumour Groups.

## 8. FINALIZE THE CHECKLIST

- Based on survey feedback and further discussions, the lists of data elements were finalized.
- The final checklists were reviewed and approved by the appropriate SON Surgical Tumour Group.

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A modified Delphi method is an effective way to develop a cancer surgery checklist. This process facilitates consensus building in an inclusive manner that engages clinicians from across BC, working in different health regions and environments with varying resources.

# NEXT STEPS



Dr. Carl Brown, (R) with a resident during a colorectal surgery

The SON Breast and Rectal Cancer Surgery Checklists have been in use since 2012, and the Thyroid/Parathyroid/Neck Dissection Operative Checklists are now completed and will be circulated in the fall 2015.

Next steps are to integrate cancer surgery checklists into hospital and cancer care processes and ensure that key data elements are collected for quality reporting and improvement.

In the future, electronic data entry for operative reports will facilitate patient care and quality assurance for cancer surgery.

***The introduction of synoptic reporting for rectal cancer will significantly improve interdisciplinary communication and lead to standardization of information. Essential data required for treatment and follow up of rectal cancer is required and would be ensured within synoptic reports. Rectal cancer represents a particularly complex management challenge involving nurses (including ostomy nurses), dietitians, gastroenterologists, surgeons, radiation and medical oncologists. It is particularly important to describe tumour location, surgical approach and outcome in a consistent and accurate manner and synoptic reporting will significantly contribute to this.***

Dr. Hagen Kennecke, Medical Oncologist, BC Cancer Agency

- 1) Clinical Preamble  
Patient is a 55 year old male who presented with rectal bleeding. He has a long tumour extending from 7.5-11 cm from the anal verge.
- 2) Summary Report
  1. Preoperative Radiotherapy: Long course (5 weeks)
  2. Preoperative Imaging: ERUS, CT abdomen/pelvis and CXR
  3. Preoperative Stage: T3 N1 MX
  4. Operative Urgency: Elective
  5. Intent of Surgery: Curative
  6. Procedure: Total Mesorectal Excision (TME) with Colo-Anal anastomosis
  7. Technique: Open
  8. Diverting Ileostomy: Yes, ileostomy
  9. Height of Tumour: From anal verge on sigmoidoscope was 7.5 cm pre-op
  10. Height of Anastomosis: From anal verge was suspected to be 3-4 cm, not examined using sigmoidoscopy
  11. Anastomosis: Stapled
  12. Reconstruction: Side-to-end anastomosis
  13. Splenic Flexure Mobilization: No
  14. Air Leak Test: No Leak
  15. Multivisceral Resection: No
  16. Intra-abdominal Adhesions: None
  17. Surgical Specimen: Grade 3
  18. Residual Cancer: None
  19. Blood Transfusion: No
  20. Unplanned Events: None
- 3) Narrative Report  
Dictate your narrative operative report with any additional details.

Sample Checklist Rectal Cancer Operative Report



Dr. Elaine McKeivitt, (L) assisted by Dr. Anne Wachsmuth during a breast surgery  
(John Lehmann/The Globe and Mail)

*As a Radiation Oncologist I rely on the operative report for important information which will assist me in making additional treatment recommendations for patients with breast cancer. Frequently the non-synoptic reports do not contain all of the information needed, which results in telephone calls to the surgeon. Since there is often a significant amount of time elapsed since the surgery, the questions often cannot be fully answered retrospectively.*

*Recently we have been receiving synoptic reports from some of the surgeons, and I have found them to be extremely valuable. All of the information I need is contained in the report, and it results in a much more efficient and accurate consultation process.*

Dr. Lorna Weir, Radiation Oncologist, BC Cancer Agency

## CONTACT

For more information on the Surgical Oncology Network or cancer surgery checklists, please contact:

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Surgical Checklists can be downloaded from the SON website at <http://www.bccancer.bc.ca/health-professionals/networks/surgical-oncology-network/surgeon-resources>