Development of Thoracic Surgery Quality Indicators Using Modified Delphi Process

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INTRODUCTION

Following implementation of the Thoracic Surgery Standards and reorganization of thoracic surgery services in the Province of Ontario, we wished to evaluate quality of surgical care by developing a set of quality indicators that assess surgical decision-making in the care of non-small cell lung cancer patients.

ACKNOWLEDGMENTS

The authors would like to thank the members of the Lung Cancer Surgery Expert Panel, Drs. Paul Chiasson, Bill Evans, Marisa Finlay, Ken Gehman, Karen Gulenchyn, Matthew Kilmurry, Donna Maziak, Ken Reid, Shafeequr Salahudeen, Michael Sanatani, Julius Toth, Yee Ung and John Vlasschaert, for their help in developing and determining the final list of Lung Cancer Surgery Quality Indicators.

METHODS

- Modified Delphi Process
- Expert panel of 16 physicians: thoracic surgeons, medical oncologist, radiation oncologist, respirologist, diagnostic radiologist, nuclear medicine and Cancer Care Ontario representative
- Systematic review identified potential indicators
- Potential indicators organized into 7 categories across the patient care spectrum (diagnostic, decision to treat, operative assessment, staging, surgery, pathology, adjuvant therapy, surgical outcomes, and miscellaneous)
- Potential indicators were rated on actionability, validity, usefulness, discriminability and feasibility in two rounds of questionnaires
- Expert Panel in person meeting to review results of questionnaires and determine final list of indicators by consensus

RESULTS

Final Thoracic Surgery Quality Indicators

<table>
<thead>
<tr>
<th>Preop assessment</th>
<th>Pathology</th>
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<tbody>
<tr>
<td>Proportion of NSCLC patients who received CT scan and PFT preop</td>
<td>Proportion of resected NSCLC patients who receive an adequate lymph node dissection or sampling at the time of resection (at least 10 lymph nodes removed and at least 3 mediastinal lymph node stations sampled)</td>
</tr>
<tr>
<td>Date of consultation with surgeon to date of decision to treat</td>
<td>Proportion of completely resected stage II NSCLC patients who receive a consultation with a medical oncologist for consideration of adjuvant chemotherapy</td>
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</tbody>
</table>

Staging

- Proportion of patients with resectable clinical stage I, II or IIIa who receive a PET-CT preop
- Proportion of NSCLC patient s with no extrathoracic metastases who receive invasive mediastinal staging (excluding peripheral stage la with negative CT and PET-CT)
- Proportion of NSCLC patients who have a biopsy of at least one ipsilateral, one contralateral and one subcarinal node and any suspicious nodes on invasive staging of the mediastinum

Surgery

- Proportion of stage I and II patients who received an R0 resection
- Proportion of stage I and II patients who received an R0 resection
- Proportion of resected NSCLC patients who have no extrathoracic metastases who receive invasive mediastinal staging (excluding peripheral stage la with negative CT and PET-CT)

Surgical Outcomes

- Proportion of completely resected stage II NSCLC patients who receive a consultation with a medical oncologist for consideration of adjuvant chemotherapy
- 5 yr survival for resected NSCLC patients by stage
- 30 day reoperation rate after resection

Miscellaneous

- Proportion of stage IIB/B NSCLC patients who receive multidisciplinary evaluation either by direct consultation or at multidisciplinary cancer conference
- Proportion of patients schedule to have an elective lung cancer resection that are cancelled
- Proportion of patients who receive multidisciplinary evaluation either by direct consultation or at multidisciplinary cancer conference

CONCLUSIONS

Seventeen quality indicators that assess aspects of care that are at the discretion of surgeons were chosen to evaluate the quality of care for patients with non-small cell lung cancer.