

Oncology Clinical Service Line System-wide Consensus Guidelines: Treatment of Stage I Lung Cancer

These guidelines apply to clinical interventions that have well-documented outcomes, but whose outcomes may not be desirable for all patients

Reference #: SYS-PC-OCSL-CG-001

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 Approved By: **Allina Health Quality Council**

System-wide Ownership Group: Allina Health Thoracic Oncology Program Committee
System-wide Information Resource: Manager of Clinical Programs

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| Hospital Division Quality Council: August 2018 |
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| Stakeholder Groups |
| Virginia Piper Cancer Institute |

SCOPE:

| Sites, Facilities, Business Units | Departments, Divisions, Operational Areas | People applicable to |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Abbott Northwestern Hospital, Buffalo Hospital, Cambridge Medical Center, District One Hospital, Mercy Hospital, Mercy Hospital – Unity Campus, New Ulm Medical Center, River Falls Area Hospital, Regina Hospital, St. Francis Medical Center, United Hospital | Thoracic Surgery Radiation Oncology Medical Oncology Pulmonology Primary Care Cancer Care Coordinators | Physicians, Nurse Practitioners, Physician Assistants |

- P-** Patients with stage I NSCLC
- I** – Follow 1 of 3 approaches outlined in “Clinical Practice” based on patient’s specific appropriateness
- C-** N/A
- O-** To ensure consistent pathway of care for all stage I NSCLC patients

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CLINICAL PRACTICE GUIDELINES:

Until further randomized prospective data matures, the Lung Program Committee endorses the current best practice recommendations put out by the American College of Chest Physicians¹ (ACCP) (1) and the National Comprehensive Cancer Network² (NCCN) (2) for the treatment of patients with stage I NSCLC. The treatment groups may be best divided into 3 categories:

- 1) Patients medically fit for surgical resection should have an operation to remove their cancer with systematic lymph node assessment. Lobectomy should be performed in most cases (**Grade 1B**). Sublobar resection can be considered for small (<2cm) ground glass opacities, and in peripheral solid nodules <1cm (**Grade 1C**). Segmentectomy is favored over wedge resection when technically feasible for sublobar resection (**Grade 2C**). Minimally invasive approach should be used when possible. (**Grade 2C**). Surgical margin should be minimum 1 cm and possibly larger for larger tumors when feasible (**1, 13, 14**)
- 2) Patients who may tolerate operative intervention but not lobectomy due to decreased pulmonary function or comorbid disease should be first considered for sublobar resection over nonsurgical therapy (**Grade 1B**). Segmentectomy is favored over wedge resection when technically feasible (Category 2A). Surgical margin should be minimum 1 cm and possibly larger for larger tumors when feasible (13, 14) minimally invasive approach should be used almost always (**Grade 2C, Category 2A**). Pathologic nodal evaluation should be considered if it has potential to change therapy (Category 2B). Referral to radiation oncology for consideration of stereotactic ablative radiotherapy (SABR) may be considered at the discretion of the treatment team or upon patient request. This is the high risk surgery group as defined by the treatment team. Effort should be made to present patients felt to be high risk at multidiscipline conference to gain consensus and consideration for referral to pulmonary prehab program prior to final risk determination (**Category 2A**). (**1, 2**)
- 3) Patients who are medically inoperable should be considered first for SABR (Category 2A). Pathologic nodal evaluation should be considered if it has potential to change therapy (Grade 2C; Category 2A). Patients with local recurrence after SABR can be considered for additional SABR treatment or other ablative therapies (radio-frequency, microwave, and cryotherapy) (Category 2A). Effort should be made to present patients felt to be inoperable at multidiscipline conference to gain consensus and consideration for referral to pulmonary prehab program prior to final risk determination (Category 2A). (**1, 2**)

For pulmonary risk stratification, the Lung Program Committee recommends complete pulmonary function tests (spirometry and diffusion) on every patient undergoing major lung

¹ ACCP evidence "Grade" of recommendations notated parentheses; grading scheme available [here](#).

² NCCN evidence "Category" of recommendations notated in parentheses; grading scheme available [here](#).

resection for treatment. Liberal use of exercise testing should be employed, when indicated, to further risk stratify patients and assist with treatment decision making.

All patients should be screened for consideration of available clinical trials (may be site specific).

Referral to Medical Oncology should be made for all patients with Stage 1B disease and higher.

SUPPORTING EVIDENCE:

The standard of care treatment for early stage non-small cell lung cancer (NSCLC) in low to moderate risk patients is lobectomy with systematic lymph node assessment (3). Recent studies have revisited the role of sublobar resection in this patient group with promising results, but further investigation is needed (4-6).

The identification and treatment of the inoperable or high-risk patient is more challenging. In years past, treatment options for medically inoperable patients were less efficacious. Conventional external beam radiation was associated with poor survival and significant morbidity (7-11). Sublobar resection for this high risk group offered the only viable treatment, but may be associated with significant risk. The emergence of SABR and radiofrequency ablation (RFA) techniques offer low risk treatment modalities for this group of patients.

Studies comparing sublobar resection, SABR, and RFA show mixed results. Most of the studies are limited by small sample size, retrospective reviews, and single institution accrual. Prospective trials were attempted, but all closed due to poor patient accrual and no statistically powerful results were published. Limited pooled results of available data from 2 studies suggest SABR should be considered as a treatment option for operable patients (12). Many questions remain including the how to best define clinical stage 1 patients? What is the value of and what defines a lymph node evaluation? What surveillance is necessary after any type of local therapy, and within the sublobar surgery group; is segmentectomy superior to wedge resection?

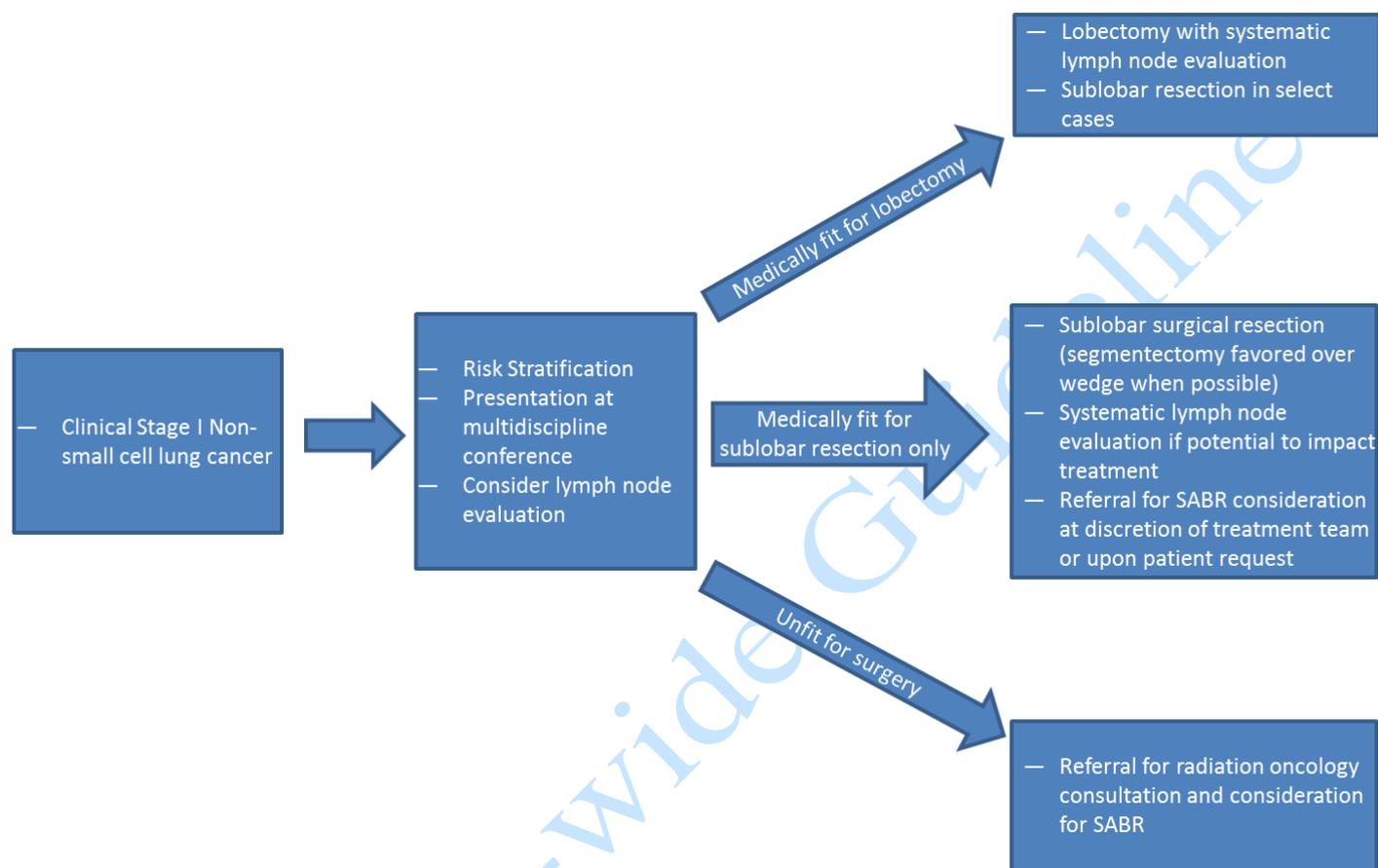
The greatest challenge remains how to define high-risk and medically inoperable patients with early stage lung cancer. Regardless of the outcome of any one trial, there will remain great debate on how to best classify this group of patients.

DEFINITIONS: NA

SPECIAL ENTITIES: NA

FORMS: NA

ALGORITHM: Stage I Lung Cancer (adapted from (2))



ADDENDA:

Plan for Adherence for Treatment of Stage I Lung Cancer Clinical Guideline

PROPOSED GOALS

Surgical Population

It is anticipated that 70-80% of Stage I Lung Cancer patients should be deemed medically fit for surgical resection. Of those patients:

- Lobectomy: 55% will undergo lobectomy with systematic lymph node evaluation.
- Sublobar resection: 45% will undergo sublobar resection (segmentectomy favored over wedge resection when possible).

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Non-surgical Population

It is anticipated that 20-30% of Stage I Lung Cancer patients will be deemed unfit for surgical resection and referred for radiation oncology consultation and consideration of stereotactic ablative radiotherapy (SABR).

All patients with stage IB lung cancer will be offered referral to medical oncology.

PROPOSED METRICS TO BE MEASURED ANNUALLY

1. Number of stage I lung cancer patients treated with lobectomy versus sublobar surgical resection.
2. Number of stage I lung cancer patients referred to radiation oncology.
3. Number of stage I lung cancer patients treated with SABR.
4. Number of stage IB lung cancer patients referred to medical oncology. 90% offered referral is acceptable minimum.

Alternate Search Terms: NA

Related Guidelines/Documents

| Name | Content ID | Business Unit where Originated |
|-------------|-------------------|---------------------------------------|
| NA | | |

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