Lung Cancer Surveillance After Definitive Curative-Intent Therapy: ASCO Guideline

Schneider et al.
Introduction

- Patients with localized non-small cell lung cancer (NSCLC) or small cell lung cancer (SCLC) are treated with intent to cure, however the optimal surveillance of these patients for cancer recurrence and new primary lung cancers after potentially curative therapy is controversial.

- The assumption by patients and providers that early detection and treatment of recurrence may lead to better clinical outcomes has resulted in increased image-based surveillance strategies, some of which may not be evidence-based.

- The purpose of this guideline is to provide recommendations to practicing clinicians and other stakeholders within the health care team on the appropriate lung cancer surveillance of patients after potentially curative treatment.
ASCO Guideline Development Methodology

The ASCO Clinical Practice Guidelines Committee guideline process includes:

• a systematic literature review by ASCO guidelines staff
• an expert panel provides critical review and evidence interpretation to inform guideline recommendations
• final guideline approval by ASCO CPGC

The full ASCO Guideline methodology manual can be found at:
www.asco.org/guideline-methodology
Clinical Questions

This clinical practice guideline addresses five overarching clinical questions:

1. What should be the frequency of surveillance imaging?
2. What is the optimal imaging modality?
3. Are there any patient factors such as performance status or age limits that would preclude surveillance?
4. Is there a role for circulating biomarkers in surveillance?
5. What is the role of brain MRI imaging for surveillance in curatively treated NSCLC & SCLC?
Target Population and Audience

Target Population
Patients with curatively treated stage I-III NSCLC & SCLC

Target Audience
Medical, surgical, and radiation oncologists; oncology nurses and physician assistants; pulmonologists; radiologists; general practitioners; and patients
NOTE:

- These recommendations apply to patients with curatively treated stage I-III NSCLC and SCLC with no clinical suspicion of recurrent disease. This includes patients treated with surgery, stereotactic body radiotherapy and chemoradiation. Please refer to the recommendation discussion section for further details on specific patient subpopulations.

- These recommendations pertain only to routine surveillance strategies. Imaging to evaluate symptoms and follow-up on previous findings are not addressed by this guideline.

- These recommendations do not address the frequency of the clinical evaluation (history and physical exam) for either the suspicion of recurrence and/or to provide reassurance.
Summary of Recommendations

CLINICAL QUESTION 1
What should be the frequency of surveillance imaging?

Recommendation 1.1.
Patients should undergo surveillance imaging for recurrence every 6 months for 2 years. (Type: informal consensus; Evidence Quality: low; Strength of Recommendation: moderate)

Recommendation 1.2.
Patients should undergo surveillance imaging for detection of new primary lung cancers annually after the first 2 years. (Type: evidence based; Evidence Quality: intermediate; Strength of Recommendation: moderate)
Summary of Recommendations

CLINICAL QUESTION 2
What is the optimal imaging modality?

Recommendation 2.1.
Clinicians should use a diagnostic chest CT that includes the adrenals, with contrast (preferred) or without contrast when conducting surveillance for recurrence during the first two years post-treatment. (Type: informal consensus; Evidence Quality: low; Strength of Recommendation: moderate)

Qualifying statement.
There is no evidence of added benefit for a CT of the abdomen and pelvis over a chest CT through the adrenals as a surveillance imaging modality for recurrence.
Summary of Recommendations

**Recommendation 2.2.**
Clinicians should use a low dose screening chest CT when conducting surveillance for new lung primaries after the first two years post-treatment. (Type: Evidence based; Evidence Quality: low; Strength of Recommendation: moderate)

**Recommendation 2.3.**
Clinicians should not use FDG-PET/CT as a surveillance tool. (Type: informal consensus; Evidence Quality: low; Strength of Recommendation: moderate)
Summary of Recommendations

CLINICAL QUESTION 3
Are there any patient factors such as performance status or age limits that would preclude surveillance?

Recommendation 3.
Surveillance imaging may be omitted in patients who are clinically unsuitable for or unwilling to accept further treatment. Age should not preclude surveillance imaging. Consideration of overall health status, chronic medical conditions and patient preferences is recommended.
(Type: informal consensus; Evidence Quality: low; Strength of Recommendation: weak).
Summary of Recommendations

CLINICAL QUESTION 4
Is there a role for circulating biomarkers in surveillance?

Recommendation 4.
Clinicians should not use circulating biomarkers as a surveillance strategy for detection of recurrence in patients who have undergone curative intent treatment for stage I-III NSCLC or SCLC. (Type: informal consensus; Evidence Quality: intermediate; Strength of Recommendation: moderate)
Summary of Recommendations

CLINICAL QUESTION 5
What is the role of brain MRI imaging for surveillance in curatively treated NSCLC & SCLC?

**Recommendation 5.1.**
For stage I-III NSCLC patients, clinicians should not use brain MRI for routine surveillance for recurrence in patients who have undergone curative intent treatment. (Type: informal consensus; Evidence Quality: low; Strength of Recommendation: moderate)

**Recommendation 5.2.**
In patients who have undergone curative intent treatment for stage I-III SCLC and did not receive PCI, clinicians should offer brain MRI every 3-months for the first year and every 6 months for the second year for surveillance. The same schedule may be offered for patients who did receive PCI. (Type: informal consensus; Evidence Quality: low; Strength of Recommendation: weak)

Qualifying statement.
Brain MRI should not be routinely offered to asymptomatic patients after 2 years of disease-free survival
Patient and Clinician Communication

- Clear and detailed communication among the patient, caregivers and physician is essential for optimal care.

- A careful discussion of both the patient and physician goals of care is critical to deliver best treatment and obtain a favorable outcome.

- This may be complicated as each patient differs with respect to disease biology, stage, social environment, culture, resources and many other factors.

- The Expert Panel emphasizes that care of the cancer patient continues after the completion of definitive treatment for potentially curable NSCLC.
Health Disparities

- Lung cancer carries a poor prognosis even in patients who receive potentially curative therapy.

- Despite the improvements of lung cancer treatment that have led to increased survival advantages in locally advanced and metastatic disease, limited access to these therapies play an important role in the outcome of cancer patients.

- Lower socioeconomic status (SES) is often associated with the lack of health insurance and studies have demonstrated that lower SES correlates with reduced OS in lung cancer patients.
Multiple Chronic Conditions

- Before the development of a surveillance program for the patient after potentially curative therapy, clinicians should review all other chronic conditions present in the patient and take those conditions into account.

- Older adult patients are more vulnerable to treatment specific toxicities and often have more difficulty recovering from adverse event when compared to younger patients. Hence, a geriatric assessment is crucial to mitigate these treatment effects.

- A geriatric assessment can also assist with treatment decisions when used as a risk assessment tool and stratify cancer patients prior to the development of a post-treatment surveillance program.

- Hence, the management of patients with significant chronic conditions is a challenge, but the use of the geriatric assessment in clinical practice may avoid unnecessary radiographic imaging and testing that ultimately reduces the patient’s quality of life.

- The Expert Panel notes that physicians must make surveillance decisions based on physiologic age rather than chronological age, so the optimal program can be developed.
Additional Resources

More information, including a Data Supplement, slide sets, and clinical tools and resources, is available at
www.asco.org/thoracic-cancer-guidelines

Patient information is available at www.cancer.net
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