

Clinical Practice Guidelines - Thoracic Disease Site

Guideline Title:	Surveillance and Follow-up of Patients after Curative Intent Treatment for Non-Small Cell Lung Cancer - Summary	Date: (O): Nov 30, 2018 (R):
Tumor Group:	Thoracic Disease Site Group	Page: 1 of 5
Issuing Authority:	Dr. Jehan Siddiqui Clinical Chief, Cancer Care Program	Date Signed: Feb 19, 2019
Adapted From:	Cancer Care Ontario's "Follow-up and Surveillance of Curatively Treated Lung Cancer Patients" guideline, August 2014 (16).	

Target Population:

These recommendations apply to all patients with stage I – III non-small cell lung cancer (NSCLC), who have received treatment with curative intent and require follow-up and imaging surveillance, for the purpose of disease control.

Recommendations:

The following recommendations of the Eastern Health Thoracic Disease Site Group apply to patients with stage I – III NSCLC, who have completed curative intent treatment, are asymptomatic, have no physical findings or laboratory abnormalities to suggest metastatic disease, and require routine follow-up and surveillance:

- Following curative-intent treatment, patients should receive scheduled follow-up visits that include a medical history and physical examination every 3 months in years one and two, every 6 months in year three, and annually thereafter;
- In addition, these patients should also undergo chest CT imaging post-treatment at 3 months, 6 months, and then every 6 months until the end of year two, then annually until end of year five.

Note: Health care professionals should use their own discretion whether to continue yearly imaging after year five, dependent upon the patient's performance status and ability to undergo treatment if a new or recurrent cancer is detected;

- PET-CT is not recommended in the routine surveillance of curatively treated lung cancer;
- Patients with an history of NSCLC who have completed curative-intent therapy, surveillance is required and may be provided by specialists, family physicians, or nurse practitioners;
- Any new, persistent or worsening symptom warrants the consideration of a recurrence, especially:
 - Constitutional symptoms (new or unexplained) such as dysphagia, fatigue, nausea and vomiting, finger clubbing, lymphadenopathy, sweats, thrombosis, weight loss, or loss of appetite,

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- Pain such as bone pain, chest pain, or caveat shoulder pain unrelated to trauma,
- Neurological symptoms such as persistent headaches or new neurological signs suggestive of brain metastases or cord compression, such as leg weakness or speech changes, headache or focal neurological symptoms,
- Respiratory symptoms such as cough, dyspnea, hemoptysis, hoarseness, signs of superior vena cava obstruction, or stridor;
- Health-related quality of life (QoL) is very important for long-term survivors suffering from late side effects of their curative-intent therapy (including surgery, radiation therapy and chemotherapy). Issues and long-term effects experienced by NSCLC survivors should be addressed by health care professionals to aid in coping with these symptoms to improve QoL:
 - Constitutional issues, such as anxiety, depression, cough, shortness of breath, fatigue, pain, sleep disturbances, dysphagia, esophageal stricture, limitations in physical activity, and general health deterioration,
 - Long-term chemotherapy effects, such as hearing loss, neuropathies, and renal impairment,
 - Long-term radiation therapy effects, such as breathing complications, breathlessness, or dyspnea,
 - Long-term surgery effects, such as oxygen dependence, post-thoracotomy pain syndrome, reduce exercise tolerance or activity limitations, shortness of breath;
- All lung cancer survivors should be encouraged to maintain a healthy weight, to be physically active, to consume a healthy diet, and limit their alcohol consumption;
- All lung cancer survivors should be considered for an annual influenza vaccination, as well as, a pneumococcal vaccination as needed. An up-to-date herpes zoster vaccine is optional based upon the discretion of a joint family physician-patient decision;
- Smoking cessation counselling, in the form of behavioral and pharmacotherapy support, as well as health care professional advice is recommended for all patients, who received curative-intent treatment for NSCLC.

Note: These guidelines do not apply to patients with a confirmed tumor recurrence, or stage IV disease.

Supporting Evidence:

Patients who have undergone surgical treatment for lung cancer are deemed at high risk for recurrence of the initial cancer (10% - 38% overall risk), or the development of a new separate or metachronous primary lung tumor (1% – 2% per year risk) (1,2). The detection of intrathoracic locoregional recurrent disease rates have been reported to be 15% to 39%, dependent upon the stage of initial diagnosed cancer (3-5). A systematic review and meta-analysis also revealed that detecting asymptomatic recurrences early has been associated with a trend for longer survival (6). Several studies have found that most recurrences occur within the first two years post-treatment however the risk remains high up to five years post-treatment (4, 5,7-9). In addition, the elevated risk for the development of a second new primary lung cancer encourages the use of imaging surveillance for detecting new lesions early, making them amenable to treatment and increasing the potential for cure. Most national and international guidelines favor more frequent imaging during the first two years, tapering to annually at around year five. The Eastern Health Thoracic Disease Site Group has chosen to adapt the Cancer

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Care Ontario (CCO) recommendations for the follow-up and surveillance of lung cancer survivors treated with curative-intent as outlined in the recommendations (16).

Despite the lack of randomized clinical trial data indicating the superiority of chest CT imaging compared to chest radiography in the surveillance and follow-up of curatively-treated NSCLC patients, several influential and respected oncology guideline organizations have chosen chest CT as the optimal imaging modality for surveillance screening for this cohort. A recent prospective Canadian study found that surveillance CT of lung cancer patients, was not only superior to CXR for the detection of both new and recurrent lung cancer, but also detected the lesions at an earlier stage (10). Therefore, the Eastern Health Thoracic Disease Site Group have agreed through consensus to recommend that all NSCLC survivors, who have been treated with curative-intent, should undergo standard-dose chest CT imaging with intravenous (IV) contrast as the mode of imaging required for routine surveillance.

The clinical examination is also a crucial component of the follow-up strategy. It allows the recognition and potential alleviation of post-treatment effects; detection and treatment of new symptomatology indicative of recurrent disease or a new primary cancer; counselling on wellness and health-related quality of life (QoL). Lung cancer survivors can experience a high symptom burden on health-related QoL one year after the diagnosis and treatment. Some non-recurrence related issues can include dyspnea, cough, fatigue, impaired breathing, pain, reduced sleep quality, and decline in appetite.

The recommendation for vaccinations for this population is based on evidence, which suggests that it is important for those with chronic pulmonary disease (e.g., COPD, emphysema, asthma), as well as smokers, are more at risk from influenza viruses and pneumococcal disease in terms of morbidity and mortality than the general population (11-13). These particular patients account for a large proportion of those who present in the clinical setting with a diagnosis of lung cancer. In addition, organizations such as the American Cancer Society and the Public Health Agency of Canada recommend these vaccinations for oncology patients, even when receiving chemotherapy as long as the vaccination does not contain live virus (14,15).

Qualifying Statement:

- This follow-up and surveillance program for patients after curative-intent treatment of NSCLC will be coordinated by a designated physician, or nurse practitioner, as per the written request of the oncology specialist at the Dr. H. Bliss Murphy Cancer Center, using appropriate clinical exam and imaging modality. This will aid in eliminating the redundancy and overuse of imaging resources by multiple sources, as well as, reducing patient stress and anxiety brought on by unnecessary multiple testing.
- The long-term follow-up care strategy for NSCLC cancer patients have evolved to include up-to-date immunizations, smoking cessation, maintaining a healthy weight, being physically active, consuming a healthy diet, and limiting alcohol consumption.

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These guidelines are a statement of consensus of the Thoracic Disease Site Group regarding their views of currently accepted approaches to diagnosis, treatment and follow-up. Any clinician seeking to apply or consult the guidelines is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient's care or treatment.

Contact Information:

For more information on this guideline, please contact Dr. Jonathan Greenland MD FRCPC, Dr. H. Bliss Murphy Cancer Center, St. John's, NL; Telephone 709-777-2440. For the complete guideline on this topic or for access to any of our guidelines, please visit our Cancer Care Program website at www.easternhealth.ca

Literature Support:

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