1. Care map information

This pathway was developed based on the Cancer Council 2016 Optimal care pathway for people with lung cancer.

2. Resources for patients, families and carers

**Australian Cancer Survivorship Centre** - https://www.petermac.org/services/support-services/australian-cancer-survivorship-centre
Has general and tumour-specific information, primarily focussed on the post-treatment survivorship phase
Telephone: +61 3 9656 5207

**Beyond Blue** - https://www.beyondblue.org.au/
Information on depression, anxiety and related disorders, available treatment and support services
Telephone: 1300 22 4636

**Cancer Australia** - https://canceraustralia.gov.au/
Information on cancer prevention, screening, diagnosis, treatment and supportive care for Australians affected by cancer, and their families and carers
Telephone: 1800 624 973

A confidential telephone support service for people affected by cancer providing information on treatment, cancer support groups and other community resources
Telephone: 13 11 20 (Monday to Friday, 8.30am – 5.30pm)

Information for patients and carers on living with illness, practical advice on how to care, and finding services
Telephone: (08) 7221 8233

Information about lung cancer and patient support

**Optimal Care pathways Resources**

3. Resources for health professionals

Information on the latest clinical trials in cancer care, including trials that are recruiting new Participants

**Cancer Australia** - https://canceraustralia.gov.au/
Information for health professionals including guidelines, cancer guides, reports, fact sheets, DVDs, posters and pamphlets

Information on prevention, research, treatment and support provided by Australia’s peak independent cancer authority

Clinical information resource providing health professionals with current evidence based, peer maintained, best practice cancer treatment protocols and information relevant to the Australian clinical environment

Information on clinical practice guidelines, cancer prevention and treatment

Optimal Care pathways Resources

4. Aboriginal & Torres Strait Islander Health
The burden of cancer is higher in the Australian Indigenous population (AIHW 2014). Survival also significantly decreases as remoteness increases, unlike the survival rates of non-Indigenous Australians. Aboriginal and Torres Strait Islander people in Australia have high rates of certain lifestyle risk factors including tobacco smoking, higher alcohol consumption, poor diet and low levels of physical activity (Cancer Australia 2013). The high prevalence of these risk factors is believed to be a significant contributing factor to the patterns of cancer incidence and mortality rates in this population group (Robotin et al. 2008).

In caring for Aboriginal and Torres Strait Islander people diagnosed with cancer, the current gap in survivorship is a significant issue. The following approaches are recommended to improve survivorship outcomes (Cancer Australia 2013):

- Raise awareness of risk factors and deliver key cancer messages.
- Develop evidence-based information and resources for community and health professionals.
- Provide training for Aboriginal and Torres Strait Islander health workers and develop training resources.
- Increase understanding of barriers to care and support.
- Encourage and fund research.
- Improve knowledge within the community to act on cancer risk and symptoms.
- Improve the capacity of Aboriginal and Torres Strait Islander health workers to provide cancer care and support to their communities.
- Improve system responsiveness to cultural needs.
- Improve our understanding of care gaps through data monitoring and targeted priority research.

5. Risk Factors

Lifestyle factors:
- Tobacco smoking

Environmental factors
- Passive smoking
- Radon exposure
- Occupational exposure (such as asbestos and diesel exhaust)
- Air pollution

Personal factors
- Age
- Family history of lung cancer
6. Signs and Symptoms

Any of the following unexplained, persistent signs or symptoms lasting more than three weeks (or less than three weeks in people with known risk factors) require urgent referral for a chest x-ray:

- unexplained haemoptysis

Or

- persistent new or changed cough
- chest and/or shoulder pain
- shortness of breath
- hoarseness of voice
- weight loss or loss of appetite
- unresolved chest infection
- abnormal chest signs
- finger clubbing
- cervical and/or supraclavicular lymphadenopathy
- features suggestive of metastasis from a lung cancer
- signs of pleural effusion.

7. Red Flag

The following signs and symptoms require **IMMEDIATE** referral to an emergency department

- massive haemoptysis - >250ml / 24hrs
- stridor

The following signs and symptoms require **URGENT** referral to a specialist linked to a lung cancer multidisciplinary team and concurrent chest computed tomography (CT) scan:

- persistent unexplained haemoptysis
- signs of superior vena cava obstruction.

**PUBLIC HOSPITAL EMERGENCY DEPARTMENTS**

**ALFRED HEALTH**

The Alfred Hospital Emergency and Trauma Centre
GP 24 hour Emergency Hotline
PH: 1800 253 733
Fax: (03) 9076 3601
Location: 55 Commercial Road, Melbourne

Sandringham Hospital Emergency Department
Ph: (03) 9076 1470
Fax: (03) 9076 1474
Location: 193 Bluff Road, Sandringham

**MONASH HEALTH**

Monash Medical Centre, Clayton - Emergency Department
Ph: (03) 9594 2149
Fax: (03) 9594 6895
Location: 246 Clayton Road, Clayton
Dandenong Hospital - Emergency Department  
Ph: (03) 9554 8541  
Fax: (03) 9554 1120  
Location: 135 David St, Dandenong

Casey Hospital - Emergency Department  
Ph: (03) 8768 1899  
Fax: (03) 8768 1982  
Location: 62-70 Kangan Drive, Berwick

PENINSULA HEALTH  
Frankston Hospital Emergency Department  
Ph: (03) 9784 7196  
Fax: (03) 9784 1164  
Location: 2 Hastings Road, Frankston (Enter via gate 2)

Rosebud Hospital Emergency Department  
Ph: (03) 5986 0623  
Fax: (03) 5986 7589  
Location: 1527 Point Nepean Road, Capel Sound

PRIVATE HOSPITALS  
Inform patients that emergency services in a private hospital may incur out-of-pocket costs

Cabrini Hospital - Emergency Department  
Ph: (03) 9508 1500  
Fax: (03) 9508 1488  
Location: 183 Wattletree Road, Malvern  
Advice: Phone switch (03) 9508 1500 and ask for the Emergency Department on-call physician

Homesglen Private Hospital - Emergency Department  
Ph: (03) 9567 9700  
Fax: (03) 9567 9703  
Location: 490 South Road, Moorabbin

Peninsula Private - Emergency Department  
Ph: (03) 9788 0888  
Fax: (03) 9788 0899  
Location: 525 McClelland Drive, Frankston

The Valley Private - Emergency Department  
Ph: (03) 9790 4250  
Fax: (03) 9790 4251  
Location: Corner Police & Gladstone Roads, Mulgrave

8. Initial investigations  
Investigations prior to referral should include:

- chest x-ray – if cancer is suspected, refer as soon as possible  
- Arrange CT of the chest and upper abdomen with contrast prior to appointment or if the chest x-ray is normal and symptoms persist  
- referral as soon as possible if the CT is abnormal (Cancer Australia 2012).

It is recommended that the general or primary practitioner make the referral appointment with the specialist
9. Red Flag
Evidence of the following should prompt urgent review by a specialist linked to a lung cancer multidisciplinary team, this may need to be facilitated by presentation to an emergency department:

- Spinal cord impingement
- SVC obstruction
- Central airway obstruction

It is recommended that the general or primary medical practitioner make the referral appointment with the specialist.

10. Specialist referral
All patients with suspected lung cancer should be referred to a specialist with expertise in lung cancer who is affiliated with a multidisciplinary team.

It is recommended that the general or primary medical practitioner make the referral appointment with the specialist.

Referral for suspected lung cancer should incorporate appropriate documentation sent with the patient including:
- a letter that includes important psychosocial history and relevant past history, family history, current medications and allergies
- results of current clinical investigations (imaging and pathology reports)
- results of all prior relevant investigations
- any prior imaging, particularly a hard copy or CD of previous chest x-rays and CT scans where online access is not available (lack of a hard copy should not delay referral)
- notification if an interpreter service is required.

The specialist appointment should take place within 2 weeks of initial GP referral

11. Respiratory Specialist
PUBLIC HOSPITAL CLINICS
ALFRED HEALTH
Lung Cancer Assessment Service
Advice: For urgent referrals, call service registrar 0407 524 911
Fax referral: (03) 9076 7631
Head of Unit: A/Prof Robert Stirling

MONASH HEALTH
Respiratory clinic or Monash Lung and Sleep
Advice: Phone Lung Clinical Nurse Consultant with a suspected lung cancer patient (03) 9594 4139
Fax referral: (03) 9594 2273
Head of Unit: Prof Philip Bardin

PENINSULA HEALTH
Respiratory Medicine Clinic
Advice: Phone (03) 9784 7058 with a suspected lung cancer patient
Fax referral: (03) 9784 2349
Head of Unit: Associate Professor David Langton
12. Diagnosis & staging

Diagnosis may be obtained from:
- bronchoscopy including endobronchial ultrasound
- CT-guided biopsy
- excisional biopsy or biopsy of metastasis
- sputum cytology (rarely)

A molecular testing of the tumour could also be undertaken.

Radiological staging is based on CT scans of the chest and upper abdomen, and of the brain. It should be reported in accordance with the tumours/nodes/metastases (TNM) staging system. Where curative treatment is being considered, further staging should be undertaken with a PET CT. PET should only be performed by credentialed health professionals.

If the treatment options are based on an advanced stage diagnosis determined by imaging alone, further tests may be appropriate to histologically confirm the cancer stage and therefore the treatment intent including:
- bronchoscopy
- EBUS
- thoracoscopy
- thoracotomy
- mediastinoscopy
- EUS
- nuclear medicine tests including bone and PET scans, with biopsies to establish pathology.

Post-resection pathology may be necessary for pathological staging.

13. Supportive care

Screening, assessment and referral to appropriate health professionals is required to meet the identified needs of an individual, their carer and family.

Supportive care in cancer refers to the following five domains:
- physical needs
- psychosocial needs
- social needs
- information needs
- spiritual needs

In addition to these five domains, specific needs that may arise at this time are:
- treatment for the physical symptoms such as fatigue and pain
- help with psychosocial and emotional distress while adjusting to the diagnosis, the shame and stigma associated with smoking, treatment phobias, existential concerns, stress, difficulties making treatment decisions, anxiety/depression and interpersonal problems
• guidance about financial and employment issues
• appropriate information for people from culturally and linguistically diverse backgrounds

14. Management & planning
All patients with suspected or proven lung cancer should be discussed by a multidisciplinary team before treatment begins.
GPs are invited to participate in person or via telephone

15. GP participation in MDT
GPs are invited to participate the MDT meeting.
It is an opportunity to discuss the case with the lead clinician.
After the meeting, GPs will receive a letter from the MDT within a week which provides details on their patient’s treatment plan

16. Treatment
The intent of treatment can be defined as one of the following:
• Curative
• Anti-cancer therapy to improve quality of life and/or longevity without expectation of cure, or
• Symptom palliation

The morbidity and risks of treatment need to be balanced against the potential benefits.

The lead clinician should discuss treatment intent and prognosis with the patient and their family/carer prior to the beginning of treatment.

If appropriate, advance care planning should be initiated with patients at this stage as there can be multiple benefits such as ensuring a person’s preferences are known and respected after the loss of decision-making capacity.

17. Side effects
Febrile neutropenia should be suspected with any temperature >38.3, or >38 on two occasions following chemotherapy.

Immunological adverse effects should be suspected in any person treated with Check-point inhibitors presenting with new dermatological, GI or endocrine symptoms.

Contact:
ALFRED HEALTH
Lung Cancer Assessment Service
Advice: call service registrar 0407 524 911

MONASH HEALTH
Respiratory clinic or Monash Lung and Sleep
Advice: Phone Lung Clinical Nurse Consultant with a suspected lung cancer patient (03) 9594 4139

PENINSULA HEALTH
Respiratory Medicine Clinic
Advice: Phone (03) 9784 7058 with a suspected lung cancer patient
18. Supportive care
Screening with a validated screening tool (such as the National Comprehensive Cancer Network distress thermometer and problem checklist - https://www.nccn.org/patients/resources/life_with_cancer/pdf/nccn_distress_thermometer.pdf), assessment and referral to appropriate health professionals or organisations is required to meet the identified needs of an individual, their carer and family.

Specific issues that may arise include:
- physical symptoms such as pain and fatigue
- oesophagitis as a result of thoracic radiation therapy requiring adequate analgesia and referral to a dietitian for nutrition intervention
- gastrointestinal symptoms (such as nausea, vomiting, mucositis and loss of appetite) as a result of chemotherapy treatment, requiring optimal symptom control with medication and referral to a dietitian if dietary intake is affected
- assistance with managing complex medication regimens, multiple medications, assessment of side-effects and assistance with difficulties swallowing medications – referral to a pharmacist maybe required
- decline in mobility and/or functional status as a result of treatment
- emotional and psychological issues including, but not limited to, body image concerns, fatigue, quitting smoking, existential anxiety, treatment phobias, anxiety/depression, interpersonal problems and sexuality concerns
- potential isolation from normal support networks, particularly for rural patients who are staying away from home for treatment
- financial issues related to loss of income and additional expenses as a result of illness and/or treatment
- legal issues (including advance care planning, appointing a power of attorney, and completing a will)
- the need for appropriate information for people from culturally and linguistically diverse backgrounds.

19. Care after initial treatment
The transition from active treatment to post-treatment care is critical to long-term health. After completing initial treatment, patients should be provided with a treatment summary and follow-up care plan including a comprehensive list of issues identified by all members of the multidisciplinary team.

20. Disease progression
Most residual or recurrent disease will be detected via routine follow-up or when the patient presents with symptoms.

Where possible, refer the patient to the original multidisciplinary team. Treatment will depend on location and extent of disease, previous management and the patient’s preferences.

Palliative care: Early referral can improve quality of life and in some cases survival. Referral should be based on need, not prognosis.

21. Palliative planning & management
Early referral to palliative care can improve the quality of life for people with cancer and in some cases may be associated with survival benefits. Referral should be based on need rather than prognosis.

If not already in place, the patient and the carer should be encouraged to develop an advance care plan.

Further information:
Refer patients and carers to Palliative Care Australia - http://palliativecare.org.au/