Algorithm for the Management of Malignant Pleural Effusion

All treatment decisions are palliative and should be guided by patient preferences.

Diagnostic & Baseline Investigations
- Initial clinical history and physical examination
- Chest radiograph: lateral decubitus positioning may be used
- CT scan, if clinically indicated and/or thoracic ultrasound
- Undiagnosed effusions >1 cm from the chest wall on a lateral decubitus chest radiograph should be diagnostically evaluated by ultrasound-assisted thoracentesis; patients known to have advanced cancer do not need thoracentesis for small asymptomatic effusions
- All effusions should be sent for cytology if a patient does not have a diagnosis

Observation
- Patients with a large MPE may be considered for a therapeutic thoracentesis

Symptomatic?
- No
- Yes

Initial Therapeutic Thoracentesis
- Total amount of fluid removed per session = 1000 to 1500 mL
- Less fluid should be removed if patient develops chest discomfort or if pleural pressures decrease below -20 cmH2O
- More fluid may be removed based on clinician judgment if chest symptoms and/or pleural pressure are monitored

Anticipated survival >5 months?
- No
- Yes

Outpatient Therapeutic Thoracentesis
- Also indicated for patients with poor PS and/or slow reaccumulation of the pleural effusion (i.e., >1 month)

Treatment decisions should consider the following:
- Patient symptoms
- Life expectancy
- Functional status
- Quality of life
- Goals of therapy

IPC
- Consider for patients with shorter anticipated survival and/or who wish to avoid hospitalization and initial discomfort of pleurodesis

Trapped lung?
- Yes
- No

IPC
- Consider for patients who experience partial symptom relief post thoracentesis

Palliative Care
- Yes
- No

Incomplete response?
- Yes
- No

Follow-up
- All patients treated with an IPC should be managed and followed-up in the context of a specialist clinic, when accessible

IPC
- Consider for patients who experience partial symptom relief post thoracentesis

Talc Pleurodesis via Thoracoscopy
- Consider for patients with longer anticipated survival and/or who wish to avoid indwelling catheter

Talc Pleurodesis via Chest Tube
- Indicated for patients with longer anticipated survival or contraindication to thoracoscopy

Chemotherapy may be considered as an adjuvant treatment option

The recommendations contained in this algorithm and accompanying guideline are a consensus of the Alberta Provincial Thoracic Tumour Team synthesis of currently accepted approaches to management, derived from a review of relevant scientific literature. Clinicians applying these guidelines should, in consultation with the patient, use independent medical judgment in the context of individual clinical circumstances to direct care.