Management of Malignant Pleural Effusion

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers. This algorithm addresses the management of malignant pleural effusion in adult patients.

**PATIENT PRESENTATION**

- **Therapeutic thoracentesis**
  - Re-accumulation of malignant pleural effusion within weeks of initial therapeutic thoracentesis?
    - Yes
    - ECOG score of 2 or less after therapeutic thoracentesis
      - Symptomatic improvement after therapeutic thoracentesis?
        - Yes
          - Monitor for re-accumulation every 2 to 4 weeks:
            - Chest x-ray PA/lateral
            - Clinical assessment
        - No
          - Life expectancy of more than 30 days
            - Consider as clinically indicated:
              - Therapeutic thoracentesis
              - Indwelling pleural catheter
              - Chemical pleurodesis if chest tube in place
          - Life expectancy of less than 30 days
            - Therapeutic thoracentesis
          - Individuallyize care as clinically indicated
    - No
      - ECOG score of 3 or greater after therapeutic thoracentesis
        - Life expectancy of more than 30 days
          - Consider as clinically indicated:
            - Therapeutic thoracentesis
            - Indwelling pleural catheter
          - Life expectancy of less than 30 days
            - Therapeutic thoracentesis
        - Individualize care as clinically indicated

- **Chest x-ray PA/lateral**
- **Schedule follow-up with new chest x-ray PA/lateral within 2 weeks**

- **Monitor for re-accumulation every 2 to 4 weeks:**
  - Chest x-ray PA/lateral
  - Clinical assessment

- **Individualize care as clinically indicated**

- **Endobronchial obstruction?**
  - Yes
    - Consider:
      - Pleurectomy
      - Therapeutic thoracentesis
  - No
    - Symptomatic improvement after therapeutic thoracentesis?
      - Yes
        - ECOG score of 2 or less after therapeutic thoracentesis
          - Life expectancy of more than 30 days
            - Consider as clinically indicated:
              - Therapeutic thoracentesis
              - Indwelling pleural catheter
          - Life expectancy of less than 30 days
            - Therapeutic thoracentesis
        - No
          - Re-accumulation of malignant pleural effusion within weeks of initial therapeutic thoracentesis?
            - Yes
              - Consider new therapeutic thoracentesis
            - No
              - Acceptable lung re-expansion or symptomatic improvement?
                - Yes
                  - Consider new therapeutic thoracentesis
                - No
                  - Consider other etiologies to explain symptoms

- **ECOG score of 3 or greater after therapeutic thoracentesis**

- **ECOG = Eastern Cooperative Oncology Group**

1 Patients with chemo-radiosensitive tumors on initial treatment (lymphoma, breast cancer, small cell lung cancer, EGFR or ALK positive non-small cell lung cancer germ cell, ovarian, prostate, and thyroid neoplasm), could obtain palliation with therapeutic thoracentesis while waiting on systemic treatment results.
SUGGESTED READINGS


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