

## IMAGES IN EMERGENCY MEDICINE

## Imaging

# Man with right shoulder pain

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## 1 | PRESENTATION

A 40-year-old construction worker presented to the emergency department with 2-month history of right shoulder pain and right hand weakness associated with mild breathlessness for a week. He was right-handed. There was tenderness over the right shoulder joint but the range of movement was normal. The tone and reflexes of his right upper limb were normal. There was muscle wasting over his right hand with reduced muscle strength of his right fingers. Sensation was lost along the medial aspect of his right upper limb. Auscultation revealed bronchial breaths and percussion note was dull over the right upper chest. Bedside lung ultrasound was performed and revealed a het-

erogenous mass with increased vascularity (Figure 1, Video 1). Chest X-ray confirmed the presence of a right upper lobe mass (Figure 2).

## 2 | DIAGNOSIS

### 2.1 Pancoast tumor

Pancoast tumor is a neoplasm occurring at the apical part of the lung. The most common presentation is shoulder pain with the incidence of 84% and the diagnosis can be delayed up to 12 months because of its atypical presentation.<sup>1</sup>



**FIGURE 1** Ultrasound of upper zone of right lung revealed a heterogenous consolidation with increased vascularity

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**FIGURE 2** Chest X-ray showing right upper lobe mass

Well-described signs such as Horner's syndrome<sup>2</sup> and respiratory manifestations indicate late stage of the disease.<sup>3</sup> If recognized early, Pancoast tumor is treatable with chemo-radiotherapy followed by surgical resection.<sup>3</sup> The 2-year survival is around 55%–70% with treatment.<sup>4</sup> Ultrasound can detect Pancoast tumor that is not apparent on chest X-ray and determine the extent of the lesion.<sup>5,6</sup>

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#### REFERENCES

1. Marra A, Eberhardt W, Pöttgen C, et al. Induction chemotherapy, concurrent chemoradiation and surgery for Pancoast tumour. *Eur Respir J*. 2007;29(1):117-126. <https://doi.org/10.1183/09031936.00108205>.
2. Whylings C, Kane BG. Horner's syndrome as a result of a Pancoast tumor. *Ann Emerg Med*. 2011;57:203.
3. Panagopoulos N, Leivaditis V, Koletsis E, et al. Pancoast tumors: characteristics and preoperative assessment. *J Thorac Dis*. 2014;6(Suppl 1):S108-S115. <https://doi.org/10.3978/j.issn.2072-1439.2013.12.29>.
4. Foroulis CN, Zarogoulidis P, Darwiche K, et al. Superior sulcus (Pancoast) tumors: current evidence on diagnosis and radical treatment. *J Thorac Dis*. 2013;5(Suppl 4):S342-S358. <https://doi.org/10.3978/j.issn.2072-1439.2013.04.08>.
5. Yang PC, Lee LN, Luh KT, Kuo SH, Yang SP. Ultrasonography of Pancoast tumor. *Chest*. 1988;94(1):124-128. <https://doi.org/10.1378/chest.94.1.124>.
6. Ekiz T, Keremli T, Ahmet CP, Emre A, Kürşad Y. Ultrasonographic imaging of a pancoast tumor presenting with breakthrough pain and not visualized by plane radiograph. *Pain Med*. 2016;17(12):2437-2438. <https://doi.org/10.1093/pm/pnw094>.

#### SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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