A 24-year-old male, recently arrived in the UK from East Africa, presented with breathlessness of 2 weeks’ duration, gradually increasing in severity, with a dry cough and sweats. He had a diarrhoeal illness 6 months ago and has recently noticed swollen glands in his neck.

**Bedside assessment summary:**
- Worried-looking patient
- Respiratory rate 34/min
- Tachycardia 120 bpm
- Temperature 41°C
- No abnormal signs in chest
- Pre-existing illness: HIV infection
- ABGs: PaO$_2$ 9.0 kPa; on FiO$_2$ 60% PaCO$_2$ 3.2 kPa
- WCC $23 \times 10^9$/L
- Normal serum urea.
You should think this patient may have HIV infection with a *Pneumocystis jiroveci* pneumonia because of country of origin, 6-month history of illness, lymphadenopathy, low WCC and appearance on CXR (Fig. 11.8).

On *investigation*, the CXR had:
- Ground glass appearance of lung fields
- Bilateral and perihilar shadowing.

**Remember**

**OTHER PNEUMONIAS**

- Inhalation pneumonia (Gram-negative organisms): heavy alcohol users
- Infected emboli to lungs (*Staphylococcus aureus*): drug users — ‘dirty’ needles and syringes
- Tuberculosis: a sputum smear for acid-fast bacilli (AFB) is quick and easy to do; can coexist with other pneumonias
- Cytomegalovirus
- Fungal: *Aspergillus, Candida albicans*
  These last two are seen in immunocompromised patients, e.g. those with:
  - HIV infection
  - Leukaemia and lymphoma
  - Chemotherapy
  - Transplantation
  - Steroid therapy
  - Chronic kidney disease.

What treatment should be started in this patient?

Treatment should start in this patient for *Pneumocystis jiroveci* infection:
- Give high-dose IV co-trimoxazole.
• Add IV cefuroxime and erythromycin if in doubt as to the cause of the pneumonia.
• Refer to an HIV specialist.
• Patient may need high-dose steroids IV if his condition deteriorates.
• Give O₂ to keep O₂ saturation >90%.
• Arrange for induced sputum collection next day.

Progress. This patient improved on antibiotics and his care was taken over by the HIV team.