

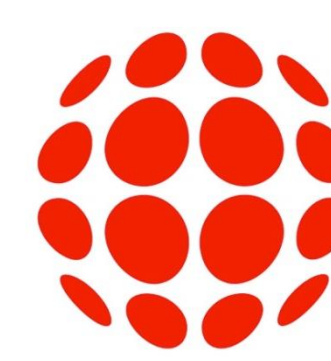
Missed and Late diagnosis of HIV- Back to the Future



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Background

- Despite better community awareness of HIV, late diagnoses — defined as a CD4+ count of <350 cells/μL at diagnosis, or presentation with an AIDS-defining illness — continue to occur in Australia^{1,2}
- The rate of new HIV diagnoses in Australia has risen in recent years, and older people are increasingly represented.¹⁻⁵
- Multiple studies have demonstrated that a diagnosis of HIV in individuals aged 50 years and over is associated with more advanced disease at the time of diagnosis, and that age is an independent predictor of clinical progression to AIDS or death.^{4,5}
- Therefore, while older people newly diagnosed with HIV are few in absolute numbers, they experience significant HIV-associated morbidity and mortality.^{4,5}

Patient results and radiology

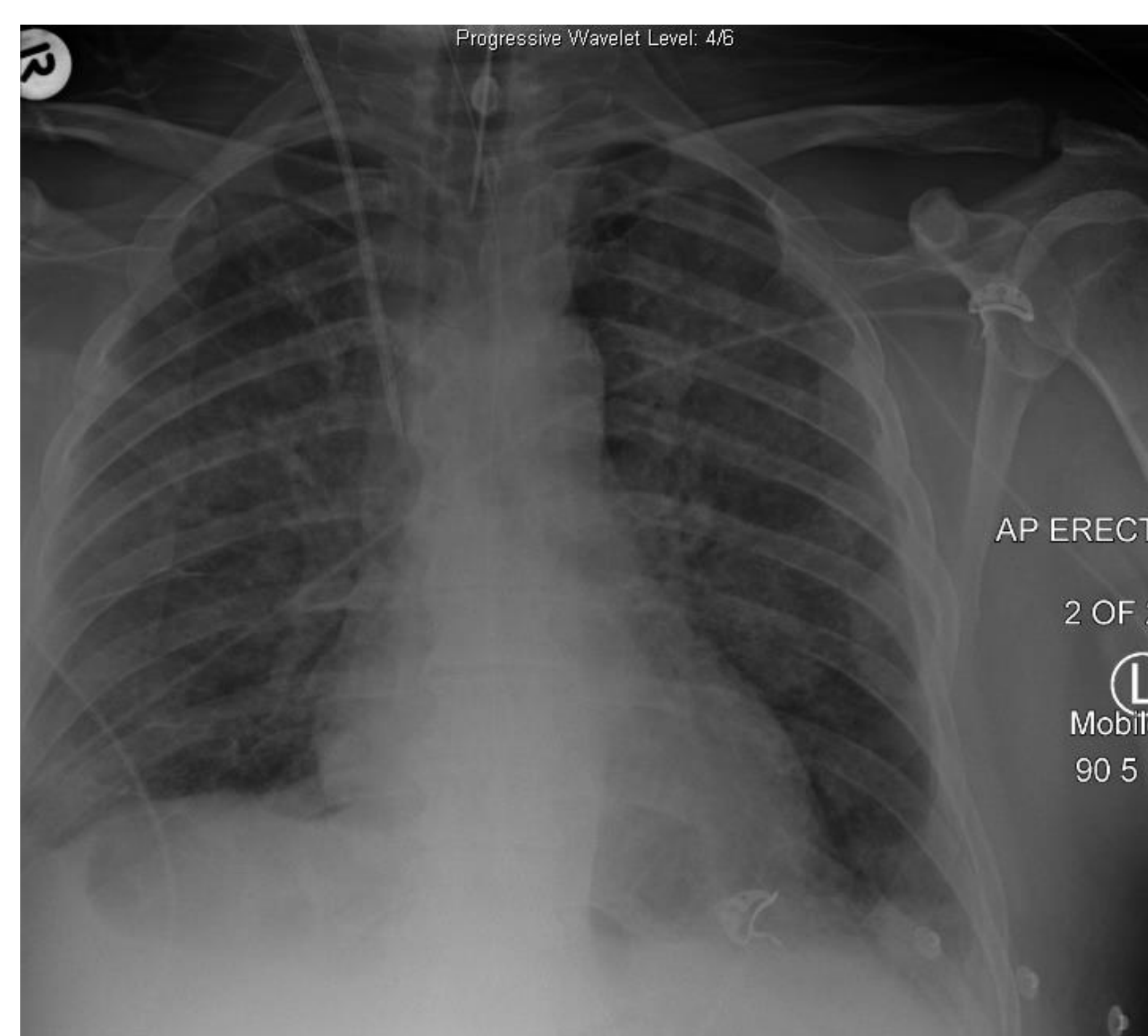


Image 1. Mobile AP chest X-ray taken on admission to ICU demonstrating endotracheal tube placement and central venous catheter placement in proximal CVC. Bilateral patchy interstitial changes and small left pleural effusions

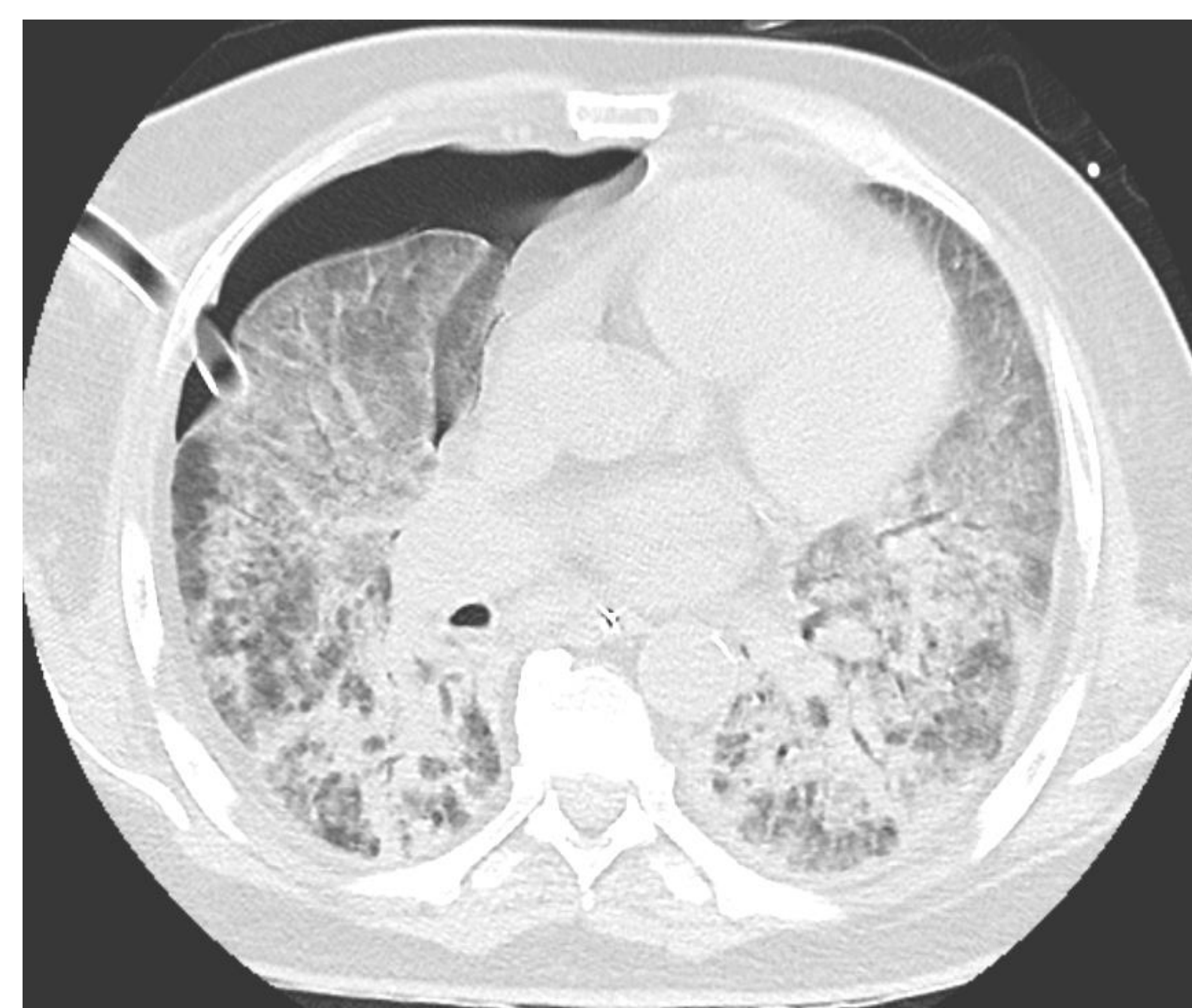


Figure 2. CT chest. Saggital cross section through mid thorax demonstrating right sided intercostal catheter in the pleural space with moderate amount of anterior pneumothorax and bilateral ground-glass opacities with patchy consolidation. No enlarged lymph nodes.

Case Report

A 67 year old married man was referred from a GP for investigation of 12 months progressive shortness of breath. The patient had been fit with an unremarkable past medical history until two years prior to presentation, when he experienced recurrent illness including a prolonged diarrheal illness after an overseas trip, two episodes of dermatomal zoster, and chronic prostatitis complicated by abscess. Over the preceding 9 months he suffered profound fatigue, >10% total body weight loss and progressive dyspnoea with a dry cough. When initially seen by a respiratory physician, he was profoundly short of breath at rest. Chest CT revealed diffuse pulmonary infiltrates and bilateral lower lobe thick walled cavities. Bronchoscopy was complicated by respiratory decompensation requiring intubation, mechanical ventilation and transfer to a tertiary centre. Advanced HIV disease was diagnosed with CD4 cell count of 3 cells/uL and viral load of 68,000 HIV RNA copies/mL.

Bronchoscopic specimens yielded multiple infective organisms including *Streptococcus pneumoniae*, picornavirus and *Pneumocystis jirovecii* (PJP). He commenced high dose Bactrim and glucocorticoids. Other baseline investigations returned a positive serum Cryptococcal antigen (lumbar puncture demonstrated elevated intracranial pressure and CSF cultured *Cryptococcus neoformans*) and was managed with liposomal amphotericin B and 5-fluorocytosine, and second daily lumbar punctures for intracranial pressure control. High level CMV viraemia in the setting of continued pulmonary pathology was treated with IV ganciclovir. The patient continued to decline over 2 weeks with multi-organ dysfunction and multiple tension pneumothoraces with a bronchopleural fistula.

Comfort care was prioritised. Questions regarding his risk factors for HIV remained unanswered.

Organism	Site isolated
<i>Cryptococcus neoformans</i>	CSF ¹
<i>Pneumocystis jirovecii</i> DNA PCR	BAL ²
<i>Streptococcus pneumoniae</i>	BAL
Picornavirus RNA PCR	BAL
<i>Cytomegalovirus</i> DNA PCR	Peripheral blood
<i>Candida glabrata</i>	BAL
<i>Candida albicans</i>	BAL

¹Cerebrospinal fluid, ² Bronchoalveolar lavage

Table 2. Summary of micro-organisms identified during patient admission

Conclusions

- Despite advances in antiretroviral therapy, patients who present with advanced HIV with AIDS defining illnesses experience significant morbidity and mortality
- This case serves as a reminder of the missed opportunities to diagnose HIV infection in patients presenting with symptoms compatible with HIV induced immunodeficiency, not only those with traditionally recognized transmission risk factors. It also underscores the importance of early HIV diagnosis.
- In Australia, HIV testing is accessible and effective treatment available, and we need to normalize HIV testing, and encourage its use in investigation of hospitalized patients

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