AND FINALLY.....

**Question:** This long standing neurology patient underwent a cystogram as part of their care with respect to ongoing urinary symptoms. What festive description is given to this bladder and what is the usual cause?

**Answer:** The Christmas tree bladder is a term that has been assigned to the distinct appearance of the urinary bladder on cystography in patients with a long standing neurogenic bladder. The bladder’s appearance has been likened to that of the typical Christmas tree with an elongated shape and a pointed dome, along with diverticular out-pouchings due to a trabeculated bladder wall that appear like barbells hanging on the tree. It is synonymous with the alternative names of a ‘fir tree’ or ‘pine cone’ bladder.

The appearance is observed in those with supra-sacral lesions (above S2-S4) which leads to detrusor hyper-reflexia and detrusor sphincter dyssynergia. The bladder is said to contract with an open internal sphincter and closed external sphincter. Functional bladder outlet obstruction, resulting from increased intra-vesical pressures results in bladder wall thickening with trabecular diverticular formation.

*Figure 1: A normal bladder on cystography*

*Figure 2: The 'Christmas tree' bladder*

*Figure 3: Illustrative representation of the Christmas tree bladder*
This young male patient presented to his GP with shortness of breath and a mild cough. He has no past medical history. What is the diagnosis?

Each type of lobar collapse of the lung has distinctive features, with left lower lobe collapse the most classical in appearance and perhaps the most difficult to identify. Correctly identifying the diagnosis also introduces another key concept of chest x-ray interpretation in that certain parts of the film - the review areas - merit special attention during interpretation.

The key sign of left lower lobe collapse is in identifying the triangular shaped density in the left retrocardiac position, representing the lobe collapsed towards the midline (Figure 1). The triangular shape, given the term 'sail sign' has its straight edge medially, with the base inferiorly and the apex towards the hilar region (Figure 2). Secondary signs include an appreciation of volume loss in the left hemithorax and the inferior position of the left hilum, it being pulled inferiorly by the lobar collapse. On the normal chest x-ray the left hilum is observed in a higher position than on the right.

The origin of the term 'sail sign' lies in its resemblance to the sail of a yacht (Figure 3).

One has a significantly higher chance of correctly identifying this pathognomonic sign if care is taken in dedicating attention to the left retrocardiac area. This is one of 5 review areas on the chest x-ray, along with the; apices, hila, breast outlines and sub-diaphragmatic space. In addition the task of identification is much harder on chest x-rays which are poorly penetrated or in patients of large body habitus.

The importance of identifying a lobar collapse, be it the left lower lobe or other lobes, is that in the adult population in most instances it heralds a sinister underlying pathology. Bronchial carcinoma is the commonest responsible offender for the collapse. Less commonly, especially in the paediatric population, other reasons may account for the collapse, such as an inhaled endobronchial foreign body or mucus plugging.

Rarely is a lateral chest x-ray merited, however the presence of lobar collapse is usually the trigger for bronchoscopy and CT imaging of the thoracic cavity. This combined approach assists in identifying the cause, extent of collapse and associated pathology.