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**ANSWER: SUMMATION SHADOW OF A SUPRADIAPHRAGMATIC LIVER.**

The aim of this image of interest is to highlight – the mimickers of lower zones lung nodule.

Supradiaphragmatic liver (SDL) is a rare normal variant of the liver. The liver protruded through a defect in the right hemidiaphragm. A non-trauma related incidental finding of “mushroom” pedunculated appearance best seen on coronal plane of CT scan favorable of SDL. Care must be taken to rule out herniated liver secondary trauma.<sup>1</sup>

Chest AP scout image (topogram) above showing mass like opacity projected to the right lower zone. AP scout image (also known as topogram) is useful to aid planning of the CT scan. In this case a CT thorax was obtained.<sup>2</sup>

After a thorough scrutinization of the multiplanar CT thorax reconstruction images, the referred lung lesion is eventually raised from segment VII of the liver, in keeping with SDL with focal diaphragmatic defect (Figure 2a&b).

“Radiographs are the summation of shadowgrams”. This statement is the main concept to understand X-ray image. Chest X-ray is an oversimplified image in 2-dimension projected from overlapping 3-dimensional tissue. The SDL is located parallel to the X-ray photon beam.<sup>3</sup> In the AP scout image, the summation shadowgrams was amplified mimicking right lower zone lung mass. This particular predicament also leads to unnecessary “overkill” laboratory and imaging investigations, further giving mental stress to an already stressful patient. In our case, the biopsy is almost being performed to the patient.



**Figure 2: a) Computed chest tomography in axial view soft tissue window revealing pedunculated liver lesion arising from segment VII, b) Segment VII SDL on coronal image soft tissue window of CT Thorax.**

**REFERENCES**

- 1: YOUNG JONG CHO, HYUK JUNG KIM, YOUNG A BAE, SUK KI JANG, JAE WOO YEON. [Supradiaphragmatic Liver Confirmed by a Hepatocyte-specific Contrast Agent \(Gd-EOB-DTPA\): A Case Report.](#) *iMRI.* 2015;19:52-55. [Accessed on 30 June 2020].
- 2: SARFRAZ AHMED NAZIR, RAHCEL BENAMORE, FERGUS GLEESON. [Missed Lung Cancers on the Scout View: Do We Look Every Time?.](#) *Case Rep Med.* 2013;2013:1-5. Article ID 760543. [Accessed on 30 June 2020].
- 3: SEIBERT JA. [X-ray imaging physics for nuclear medicine technologists. Part 1: Basic principles of x-ray production.](#) *J Nucl Med Technol.* 2004; 32(3):139-47. [Accessed on 30 June 2020].