

# Computed Tomography Scan in Necrotizing Granulomatosis

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A wide spectrum of radiographic abnormalities characterizes necrotizing granulomatosis. Most patients have lung nodules that vary in size from a few millimeters to a few centimeters [1], are bilateral in 75% of cases, have no lung zone predilection [2], but have a blood vessel leading to a nodule, air bronchogram within the nodule [Figure 1], a linear band, spiculations (small, slender, pointed structures) [Figure 2] and pleural tags that can be demonstrated on computed tomography. The classical radiological finding in necrotizing

granulomatosis is cavitated nodules. In the case shown here, the nodule is about 2 cm in size [Figure 3].

Although nodules are an important sign, their absence does not preclude the diagnosis of Wegener's granulomatosis, and airspace consolidations and ground-glass opacities [Figure 4] may occur with or without the presence of nodules. Other less common pulmonary abnormalities are bronchovascular thickening, mild bronchiectasis, segmental atelectasis, pulmonary infarcts, pleural effusion or thickening, and rarely, hilar and mediastinal lymph node enlargement.

Ear involvement, in the form of otitis media, is seen in more than half the patients [3]. Paranasal sinus involvement is also common [4]. In the patient presented here, otitis media was not observed on CT [Figure 5]; however,

the mastoid cells were filled with fluid bilaterally, and the paranasal sinuses were not involved.

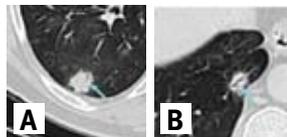
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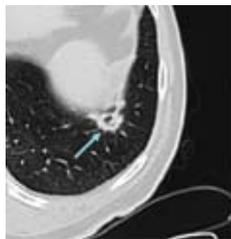
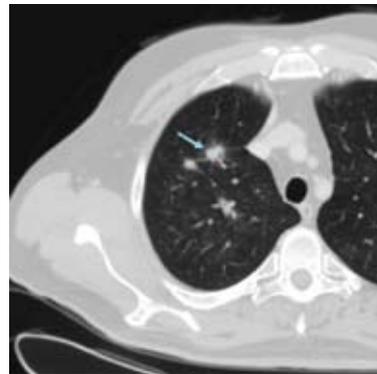
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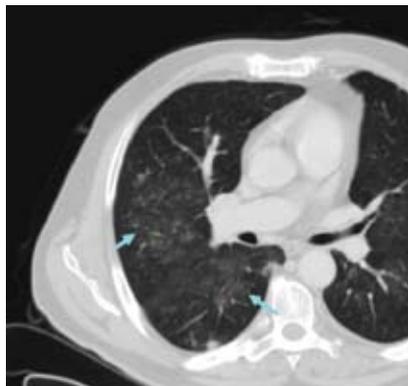
**Figure 1.** Axial CT, lung window, [A,B] nodule with air bronchogram (arrows).



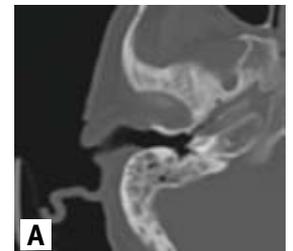
**Figure 2.** Axial CT, lung window, showing multiple lung nodules in varying sizes. One of the nodules has spiculations (arrow).



**Figure 3.** Axial CT, lung window, cavitating nodule (arrow).



**Figure 4.** Axial CT, lung window, showing ground glass opacities (arrow).



**Figure 5.** Axial CT, bone window, full size [A] and close up [B], showing no abnormality of the middle ears. The mastoid cells are filled with fluid bilaterally. The Para-nasal sinuses, a common site of involvement in necrotizing granulomatosis, are unaffected in this case.