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Hypodense Sign in Lungs on CT in Immunocompromised Patient

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We read with interest the article entitled "Imaging Approach to Pulmonary Infections in the Immunocompromised Patient" by Grover et al.[1] We would like to add a "hypodense sign" (HyS) to the list of radiological findings described by the authors. The HyS was described by Horger et al as[2] the presence of a central area of hypodensity seen on narrow window settings (width: 110–140 Hounsfield Units [HU]; level: 15–40 HU). This sign can be seen in consolidation or nodule and can be appreciated on unenhanced scans, computed tomography pulmonary angiography (CTPA), and contrast-enhanced scans. This sign has been reported to be associated with invasive pulmonary aspergillosis, mucormycosis, and fusariosis.[3,4] The hypodense nodule sign has been described in the context of immunocompromised patients. The underlying pathogenesis is infarction secondary to angioinvasion by fungal elements.[3,4] This sign may be a precursor for forming a cavity.[2,5] Some studies have described the importance of hypodense sign in diagnosing invasive mold disease (►**Table 1**). Hence, it is a helpful sign in arriving at the diagnosis of invasive mold disease with a sensitivity of 23% on high-resolution CT (HRCT) and 64% on CTPA, and a specificity of 100% on HRCT and 98% on CTPA.[3] This sign can help to differentiate between bacterial and fungal diseases in immunocompromised individuals.[2,3] This sign has also been described in some bacterial infections, particularly in tuberculosis, i.e., a cavity filled with central mucous within or in case of a pulmonary abscess; however, leukocytes play a vital role in abscess formation, and immunocompromised individuals usually have neutropenia.[3,6] Hence, we would like to add the hypodense sign as a useful diagnostic sign in CTs of immunocompromised individuals.

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Conflict of Interest
None declared.

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Table 1 Studies describing hypodense sign in immunocompromised patients

Study	Sample size	Type of scan	Patient population
Horger et al[2]	43	Unenhanced scan	Neutropenic patients
Sassi et al[3]	127	HRCT and contrast-enhanced CT	Hematological Malignancies
Qin et al[5]	25	CT chest with intravenous contrast and without intravenous contrast	Liver transplant patients
Stanzani et al[6]	44	Unenhanced scan and CTPA	Hematological malignancies
Schulze et al[7]	17	Noncontrast CT and volume perfusion CT	Hematological malignancies

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