piratory symptoms (1). Seventy of these patients were homosexual males, the other patient was a female with Von Willebrand's disease. There were no i.v. drug abusers represented in their study.

Intravenous drug abusers comprise ~17% of AIDS cases in the United States (2), although they have accounted for <2% of AIDS victims here in Canada (3). Intravenous drug abusers are at increased risk for a variety of disorders, including pulmonary talc granulomatosis (4). To date there has been only occasional reference to pulmonary talc granulomatosis (PTG) in the literature on AIDS-related pulmonary disease.

We recently reported a case of PTG that clinically simulated *Pneumocystis carinii* pneumonia (5). The patient was a 32yr-old HIV-positive bisexual male intravenous drug abuser who presented with respiratory symptoms. Routine chest radiology showed some nonspecific changes in the lower regions of both lungs. However, <sup>67</sup>Ga scintigraphy revealed marked bilateral diffuse pulmonary uptake. Transbronchial biopsy and bronchoalveolar lavage resulted in a definitive diagnosis of pulmonary talc granulomatosis. Thus pulmonary talc granulomatosis that give rise to a positive <sup>67</sup>Ga lung scan in patients with or at risk for AIDS.

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## Prognostic Value and Pathophysiologic Significance of the Rim Sign in Cholescintigraphy

TO THE EDITOR: It was with great interest that we read the article by Meekin et al. in the JNM (1). All of their 27 patients had been fasting at least 2 hr but <48 hr prior to the study. It was mentioned that none of them received cholecystokinin. However, we would like to know whether some or all of them received low dose morphine (2) and/or a fatty meal (3). Furthermore, for a quicker diagnosis, ultrasonography may provide a safer alternative to scintigraphy, because pericholecystic edema is visualized as hypoechoic areas and triplelayered thick-walled gallbladder is characteristic in acute cholecystitis.

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**REPLY:** In reply to Dr. Taher's question, no patient in our study received morphine or a fatty meal prior to the study. Pericholecystic fluid, usually a sign of gallbladder perforation, is seen in only 10-25% of cases of acute cholecystitis with ultrasonography and may also be seen with pancreatitis, peptic ulcer, liver abcess, peritonitis, or hemorrhage from a rupture of a hepatic adenoma or an ectopic gestation (1,2). Marchal et al. described continuous or localized anechoicities within a thickened, irregular wall as a sign of acute cholecystitis and ascribed it to a zone of edema (3). One study found anechoic areas in the wall of 71% of patients with acute cholecystitis (4). However, gallbladder thickening with or without anechoicities has been seen in a variety of conditions unassociated with intrinsic gallbladder disease. The majority of conditions with associated wall thickening have a common physiological basis for this finding, i.e., increased transudation of fluid into the extravascular space secondary to decreased plasma oncotic pressure or increased portal or systemic venous pressure. These conditions include hypoproteinemia, cirrhosis, congestive heart failure, renal failure, focal obstruction of gallbladder lymphatic drainage, e.g. by a porta hepatis mass (5). In a comparative study of 100 patients with pathologically proven acute cholecystitis, realtime ultrasonography had a sensitivity of 24% using strict criteria (wall edema and/or pericholecystic fluid), 86% using liberal and less specific criteria (stones, thick wall, nonshadowing echo and/or Murphy's sign), compared to 97% for cholescintigraphy (6). Another study comparing real time ultrasonography with cholescintigraphy found similar sensitivities for confirmed acute cholecystitis (97%), but scintigraphy demonstrated better specificity (93% vs. 64%) (7). In this study, echogenic foci with acoustical shadowing as well as wall edema, and/or pericholecystic fluid was used as diagnostic criteria. Therefore, we do not agree with Dr. Taher's suggestion that ultrasonography might be preferable to cholescintigraphy for the routine diagnosis of acute cholecystitis. However, in the setting of prolonged fasting or intercurrent illness, where cholescintigraphy is still sensitive, but less specific than desired, gallbladder sonography may be a reasonable alternative (8).

Clinically, the rim sign is an ancillary finding for the diagnosis of acute cholecystitis in the setting of non-visualization of the gallbladder. It appears to be an indicator of patients presenting at a later stage of the pathological spectrum of acute cholecystitis and, therefore, at increased risk for complications. If the sign holds up as specific for acute cholecystitis, it may also be helpful in decreasing the length of the