<B> Background. </B> Guided bronchoscopy has been found to be useful for the diagnosis of solid peripheral pulmonary lesions (PPLs) but more evidence on peripheral pulmonary ground glass opacities (GGO), especially those without a solid component, are lacking.

<B> Case Presentation. </B> To describe how we successfully obtained diagnostic transbronchial biopsy (TBB) samples from a PPL with pure GGO, we present a case of a 69 year old male with an incidental finding of a focal pure GGO in the posterior segment of the right upper lobe on computed tomography scan (Fig. 1A). Bronchoscopy with the use of virtual bronchoscopic navigation (Fig. 1B), endobronchial ultrasound with a guide sheath (Fig. 1C), and fluoroscopy guidance (Fig. 1D) was performed for diagnosis. Cytology specimen that was collected by brush was negative for malignant cells. Five consecutive TBB specimens were obtained and histopathology examination revealed adenocarcinoma on the fourth and fifth specimens. There were no complications after the procedure. The diagnosis was confirmed on the surgical specimen to be minimally invasive adenocarcinoma (Fig. 1E).

<B> Conclusion. </B> Image-guided bronchoscopy with transbronchial biopsy was successful for the diagnosis of a patient with pure GGO. Use of a larger biopsy device may be helpful for the histopathologic diagnosis of lung adenocarcinoma with lepidic growth.