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**Title:** Invasive pulmonary aspergillosis: What is the role of surgery in the voriconazole era?

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**Body:** Invasive pulmonary aspergillosis (IPA) is one of the most severe infections in immunocompromised patients. In the 90's, surgery was considered a potentially curative treatment. Since voriconazole has become the first line treatment, the role of surgery has not been evaluated. Thirty immunocompromised patients who underwent surgery for a suspected IPA between 1990 and 2010 were retrospectively reviewed and separated into two groups: the group A (n=20) who received amphotericin B or itraconazole before the surgery, and the group B (n=10) treated by voriconazole. The diagnosis of IPA before surgery was certain or probable for 60% of the patients. The main indications for surgery were: the resection of a persistent pulmonary lesion prior to subsequent immunosuppressive treatments (50%), incomplete control of the infection (43%), and risk of haemoptysis (10%). The median duration of antifungal treatment before surgery was 1.3 months in the group A, and 2.5 months in the group B (p=0.2). Persisting aspergillosis was confirmed for 85% among the patients from the group A, and only 20% of the group B (p<0.001). Anatomopathological study provided an alternative diagnosis for 4 patients, all in the group B: 2 mucormycosis, 1 mycobacterial infection, 1 specific lesion of the leukemia. Perioperative mortality was low (3%). Surgery is a therapeutic option for IPA with low mortality in a well trained surgical team. In the voriconazole era, the proportion of resected pulmonary lesions containing *Aspergillus* appears to be decreasing, whereas other fungal infections are detected. The role of surgery has to be defined in patients previously treated with voriconazole, particularly for remaining pulmonary lesions.