Dyspnea and cough in a COPD patient

Case history

- Female patient M., 62 y.o.
- Since 1976, X-ray changes characteristic of bronchoectasis
- In 1979, after bilateral pneumonia, lobectomy was performed with resection of both middle and lower right lung lobes
- Since 1994, 1-2 episodes of haemoptysis (bloody expectorations) per year

Case history

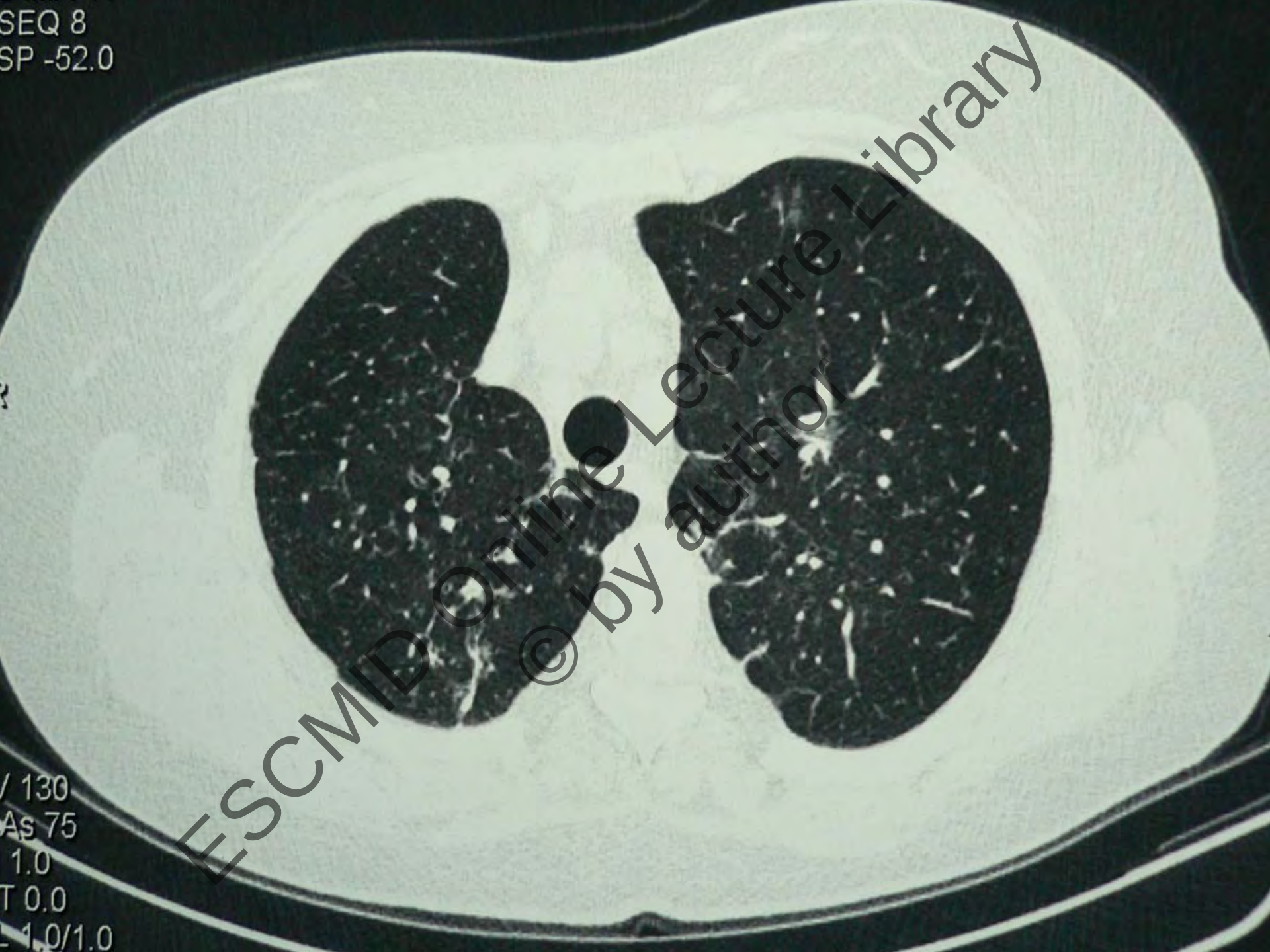
- Since 1996, dyspnea of mixed type at the presence of physical workload, episodes of shortness of breath.
- Obstructive changes were found on measurements of respiratory function. COPD was diagnosed
- Fenoterol inhalation were prescribed
- No inhaled corticosteroids were given
- Since 2002, systemic corticosteroids (triamcinolone 24 mg per day) were prescribed
- COPD exacerbation 2-3 times a year requiring hospitalization. Intravenous steroids were given at hospital

Case history

- In April 2004 – worsening of condition, increase of axillary temperature up to 39^{o}C
- Absence of efficacy of antibacterials
- Episodes of blood spitting with unchanged blood

Case history

- On April 24, 2004, hospitalization at Central Regional Hospital
- General blood count on April 25, 2004: Hb 110 g/L, Erythrocytes $3.95x10^{12}$/L, leucocytes – $15.1x10^{9}$/л, bands - 2%, segments - 58%, eosinophils - 10%, lymphocytes - 15%, monocytes - 4%, ESR - 50 mm/h.
- Blood serum Platelia *Aspergillus* test on April 29, 2004: Index = 0.85
- BAL of April 29, 2004: septate mycelia branching on acute angle
- *Aspergillus fumigatus* on culture
- Spyrometry on April 25, 2004: total lung capacity – 4.3 L (85%), vital lung capacity – 3.26 (78%), FEV_1 – 2.3 (82%).
- Interpretation of spyrometry – decrease of vital lung capacity; substantial changes in airways patency; salbutamol probe is positive

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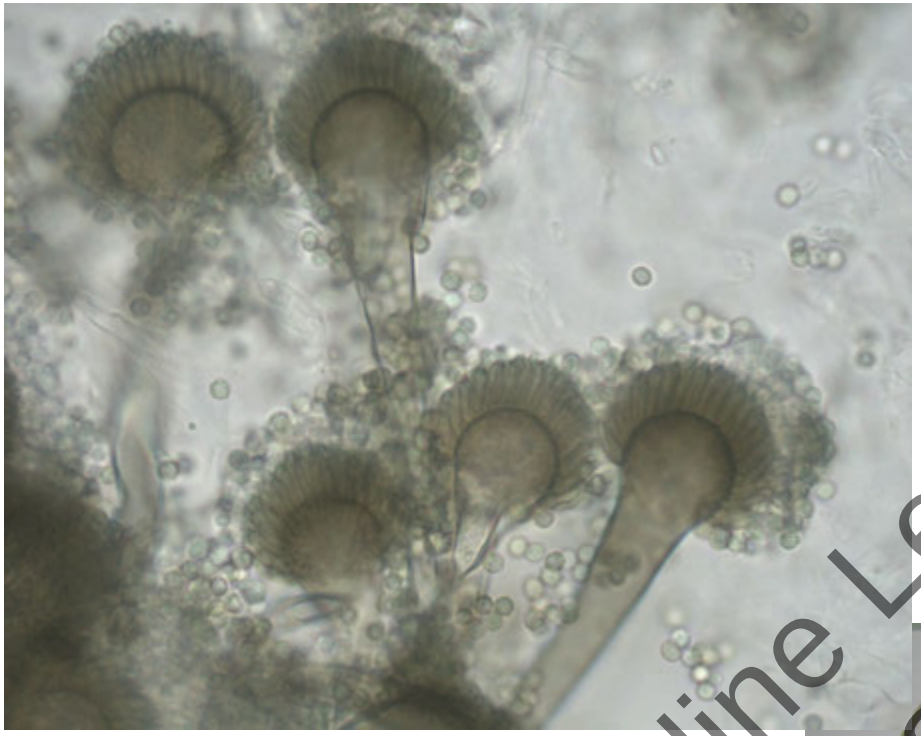
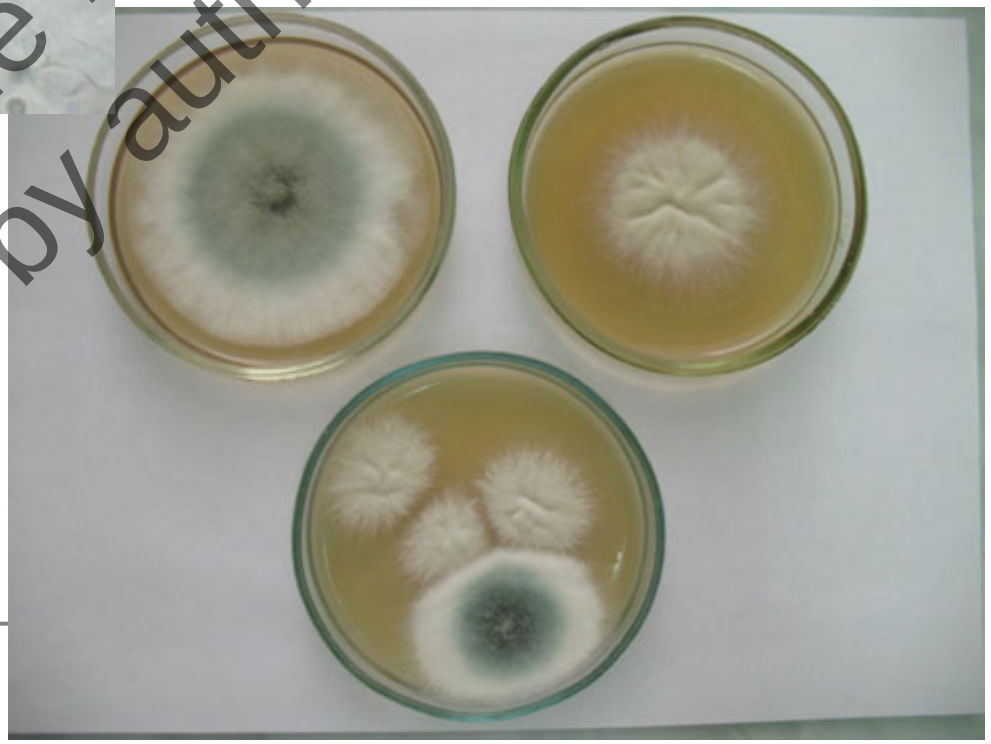
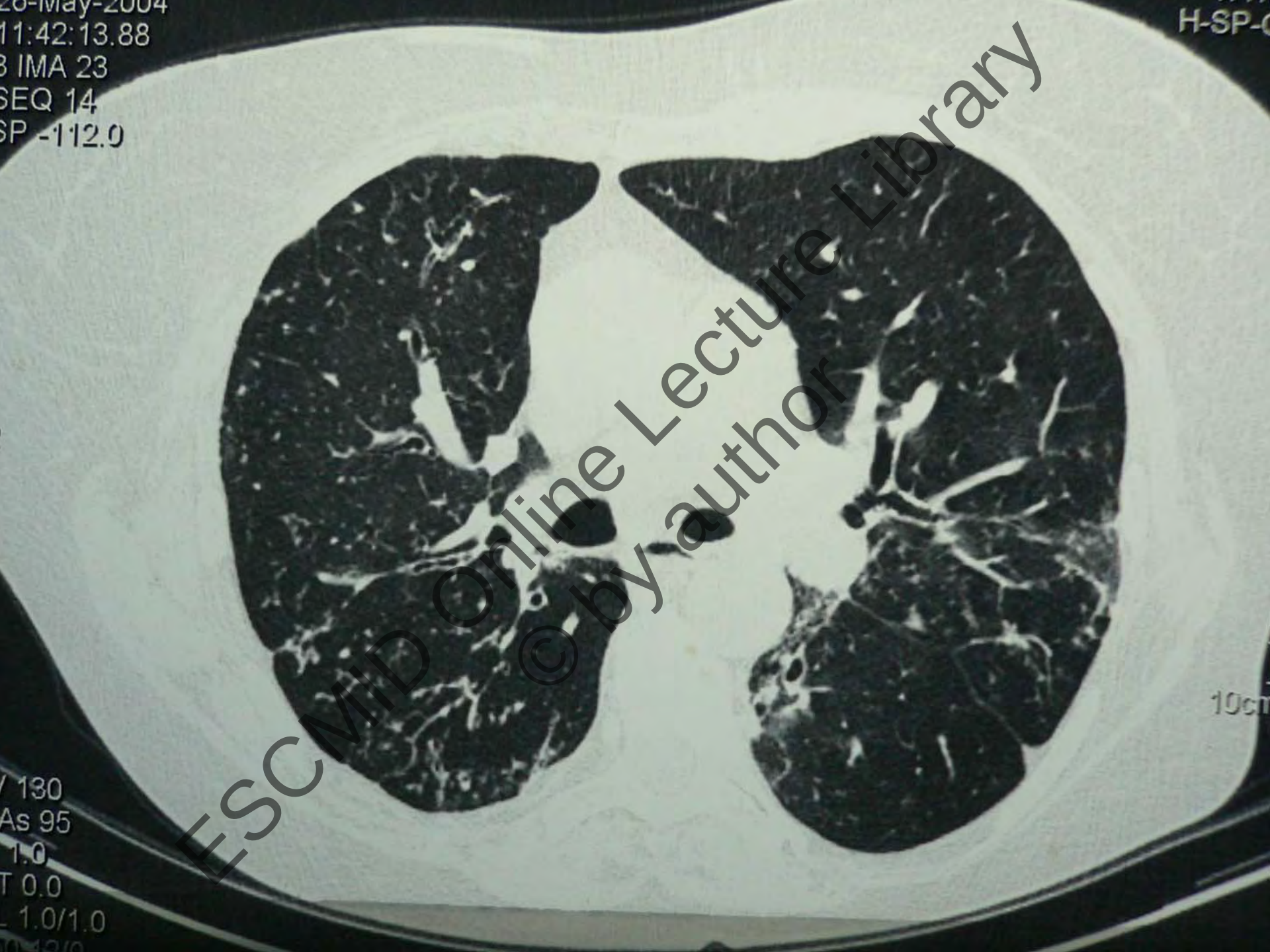
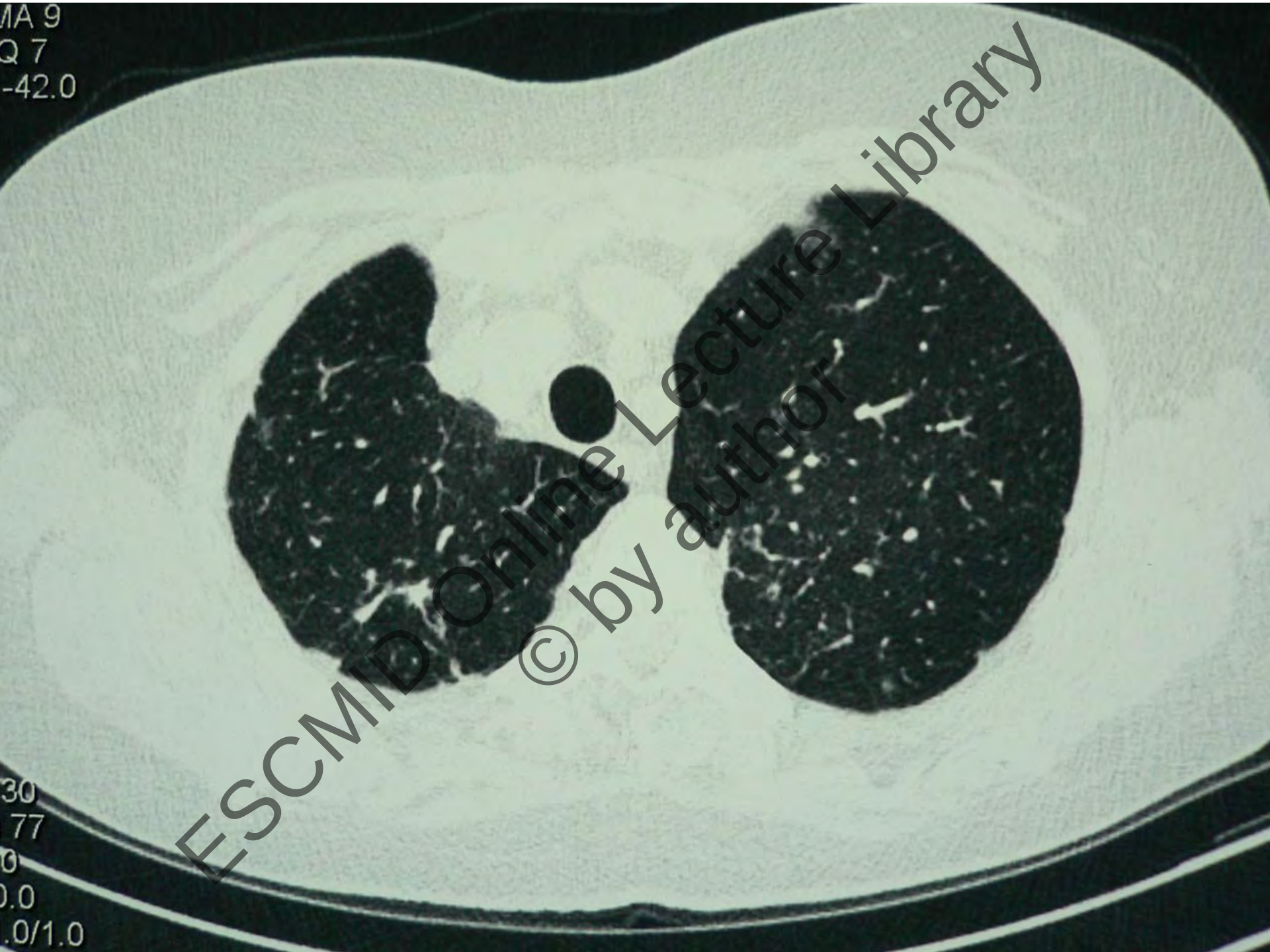
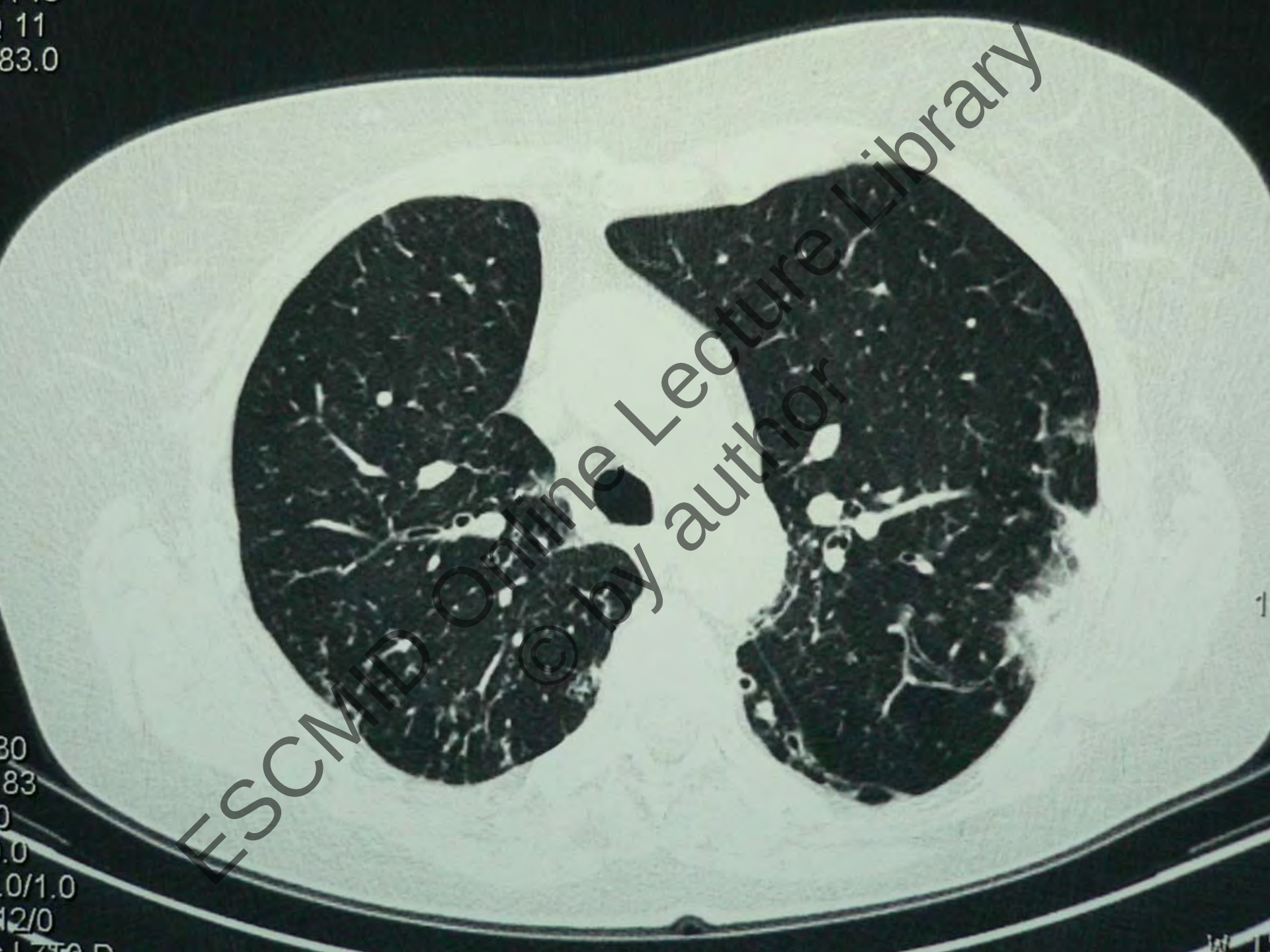
Aspergillus fumigatus

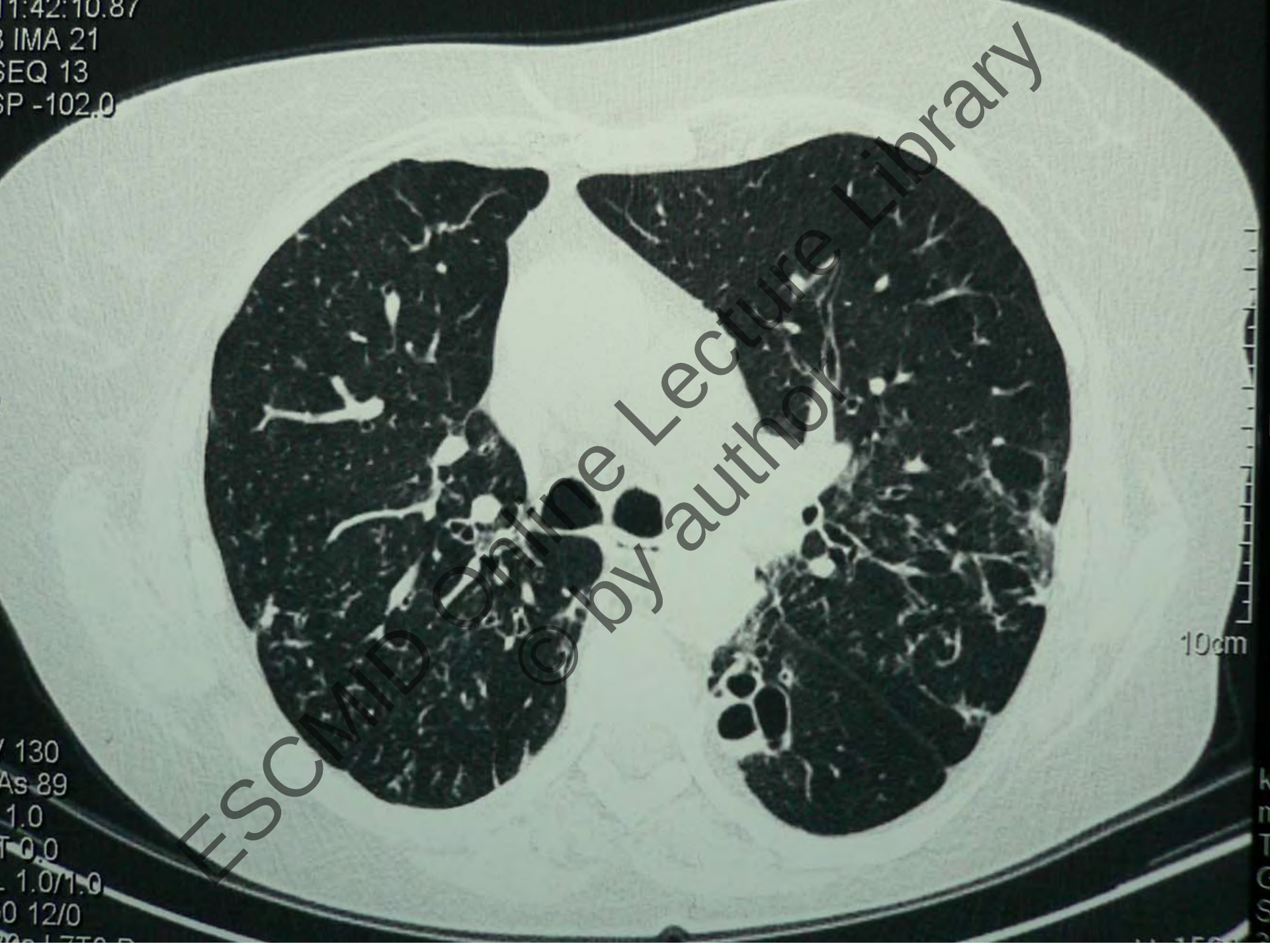


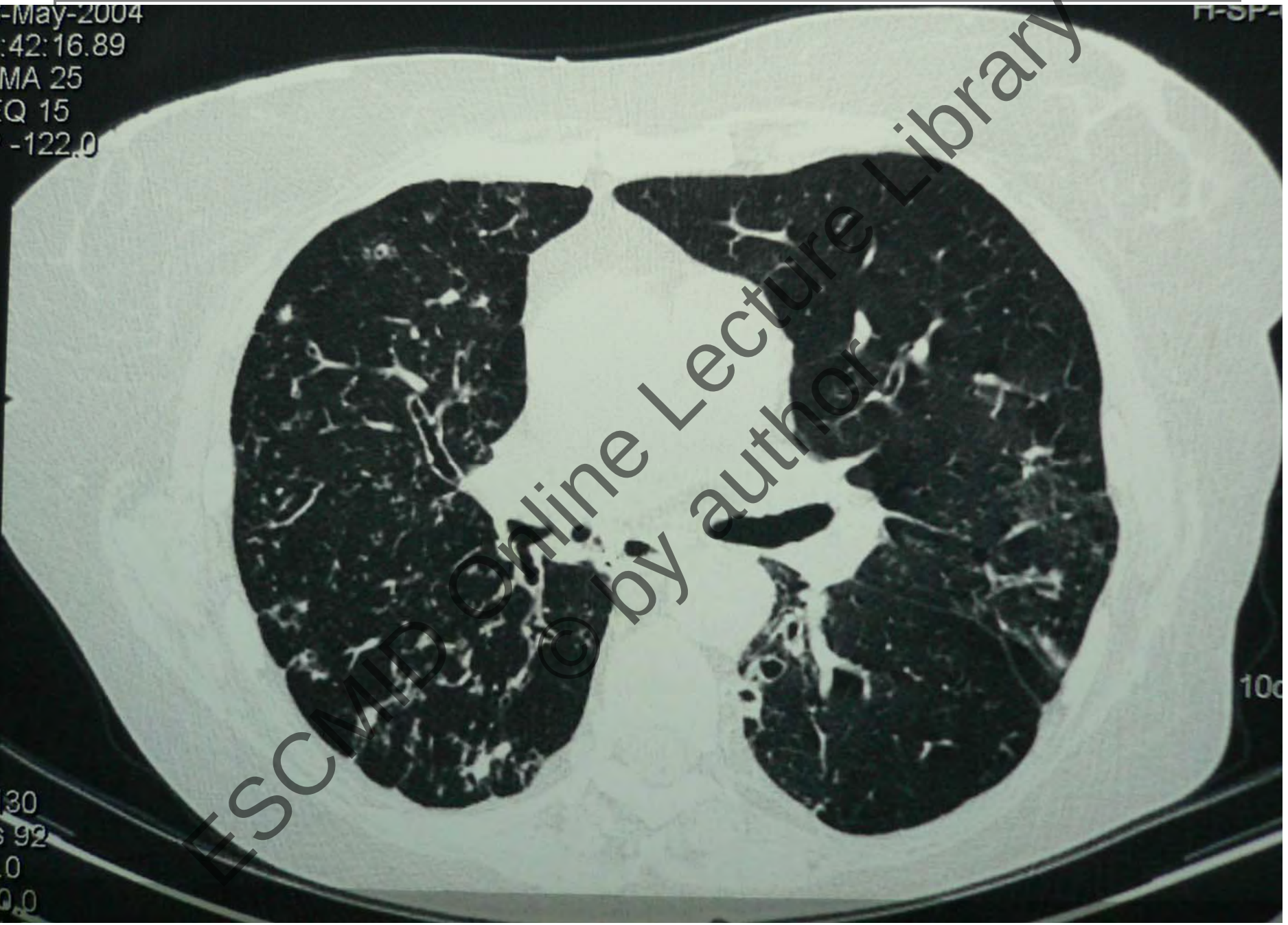












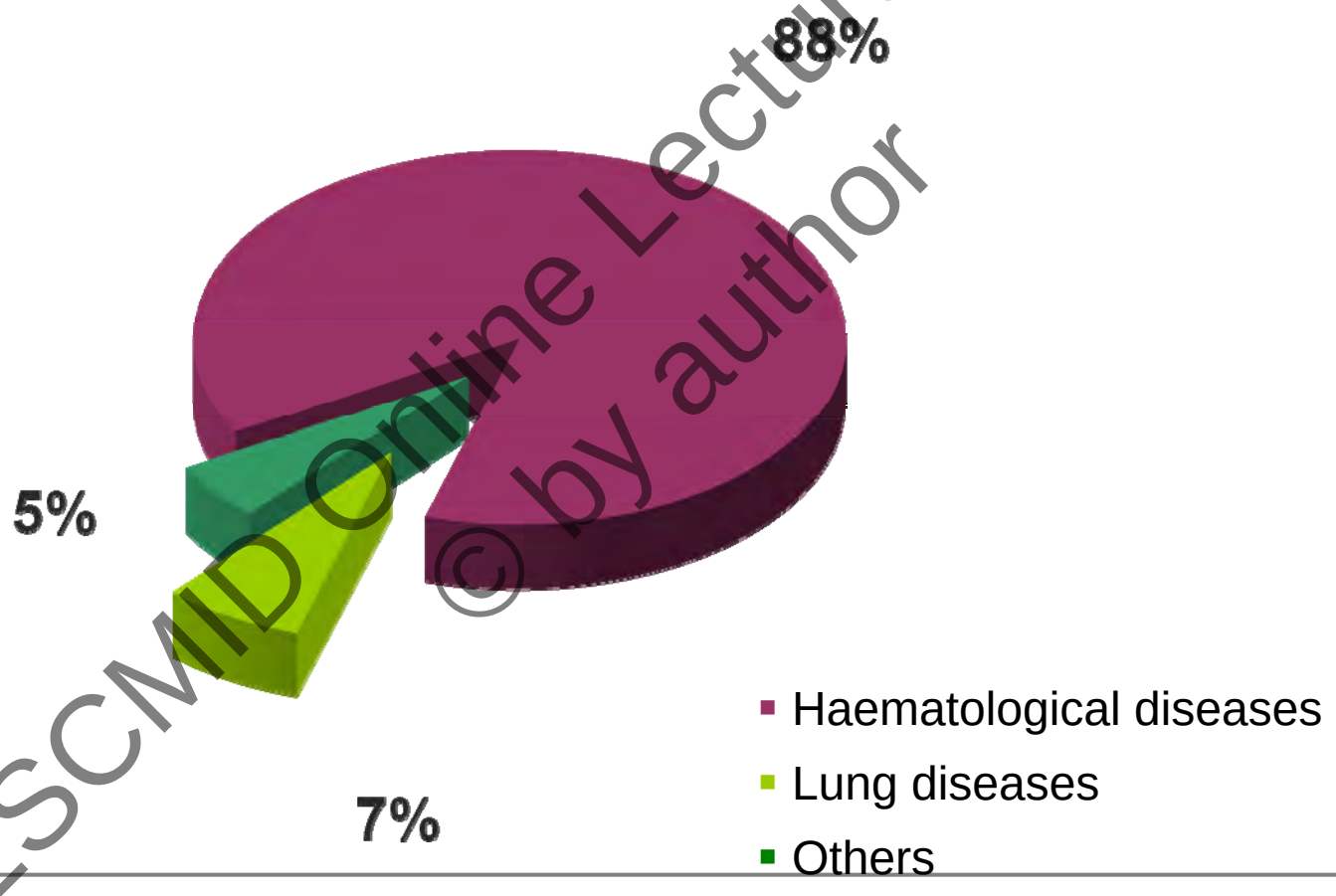
Diagnosis

- Invasive lung aspergillosis. COPD. Bronchiestasis of both lungs.

Treatment

- Amphotericin B 0.75-1 mg/kg/day IV 50 days
- Itraconazole 400 mg orally 60 days
- Long-term remission

Invasive aspergillosis in Saint-Petersburg: concomitant conditions



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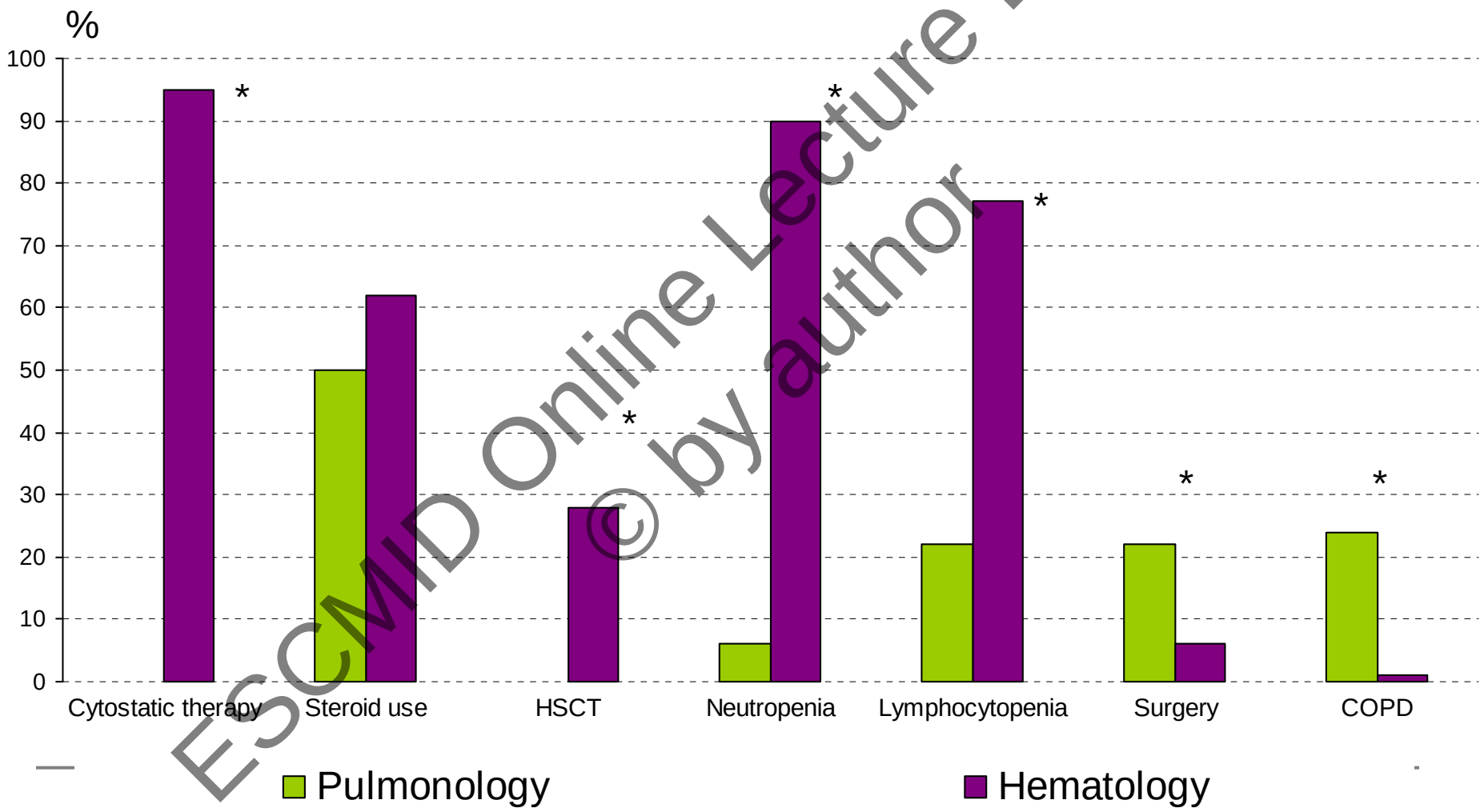
Invasive aspergillosis in Saint-Petersburg: risk factors



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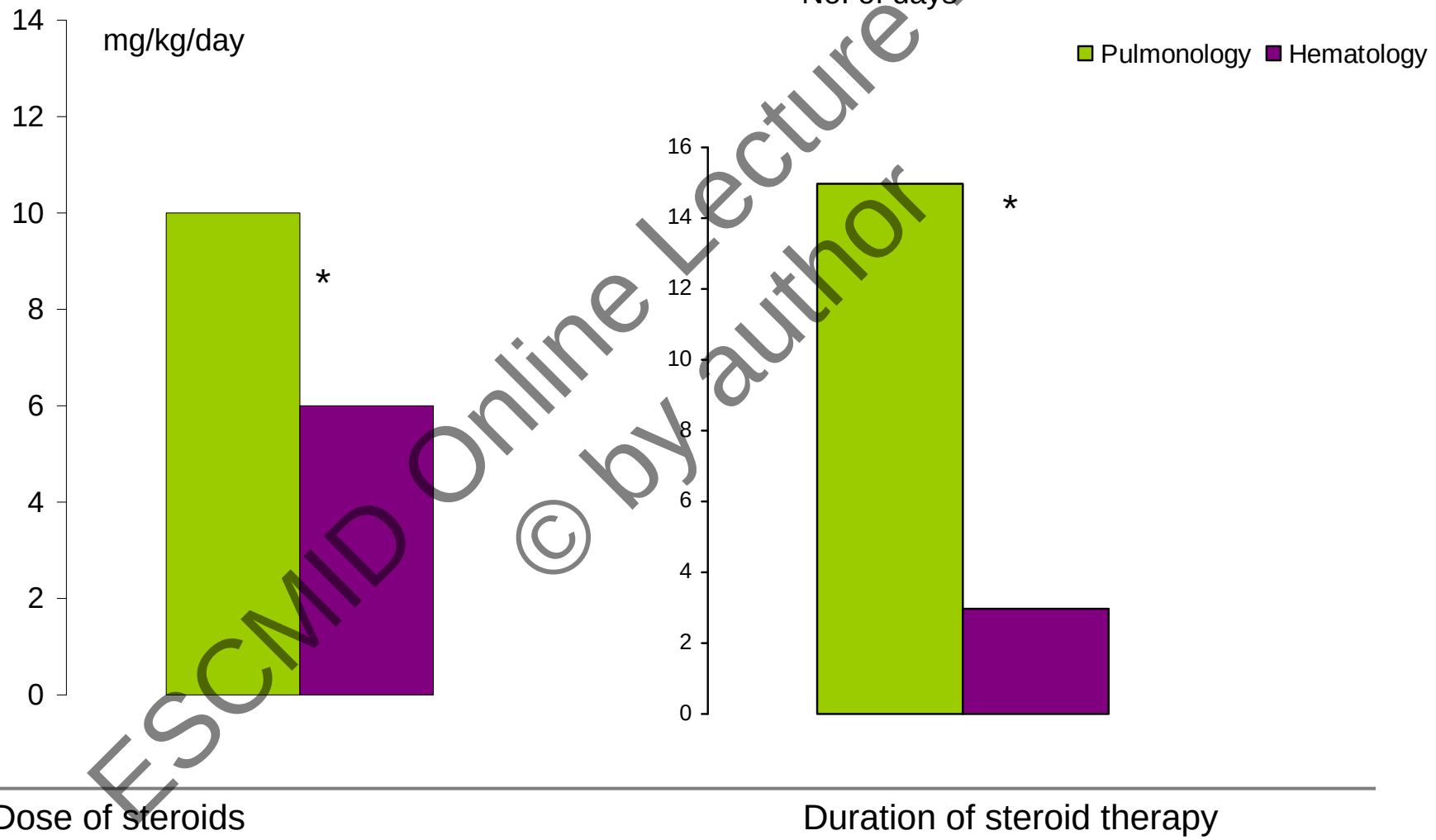
Invasive aspergillosis in Saint-Petersburg: risk factors



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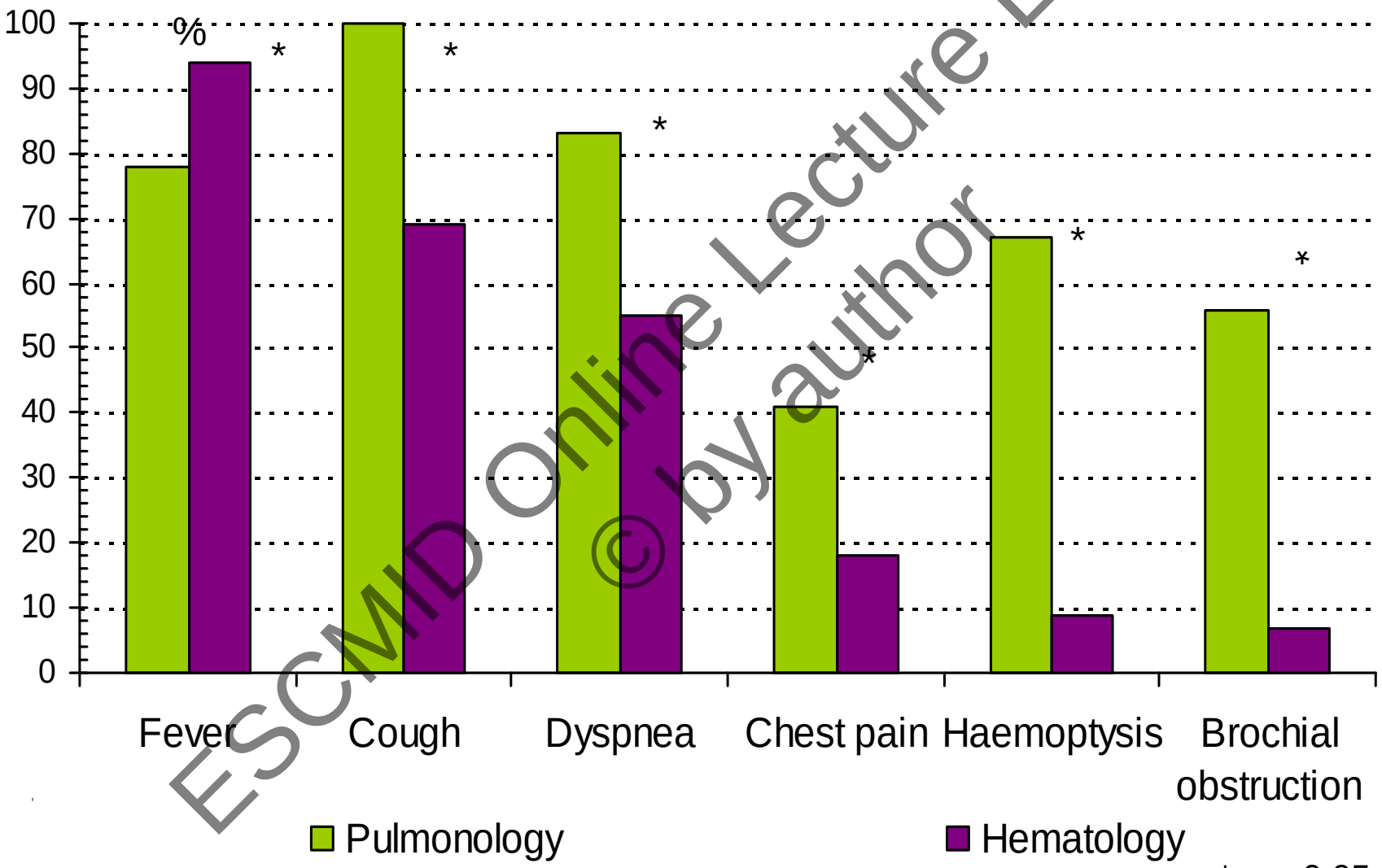
Invasive aspergillosis in Saint-Petersburg: clinical signs



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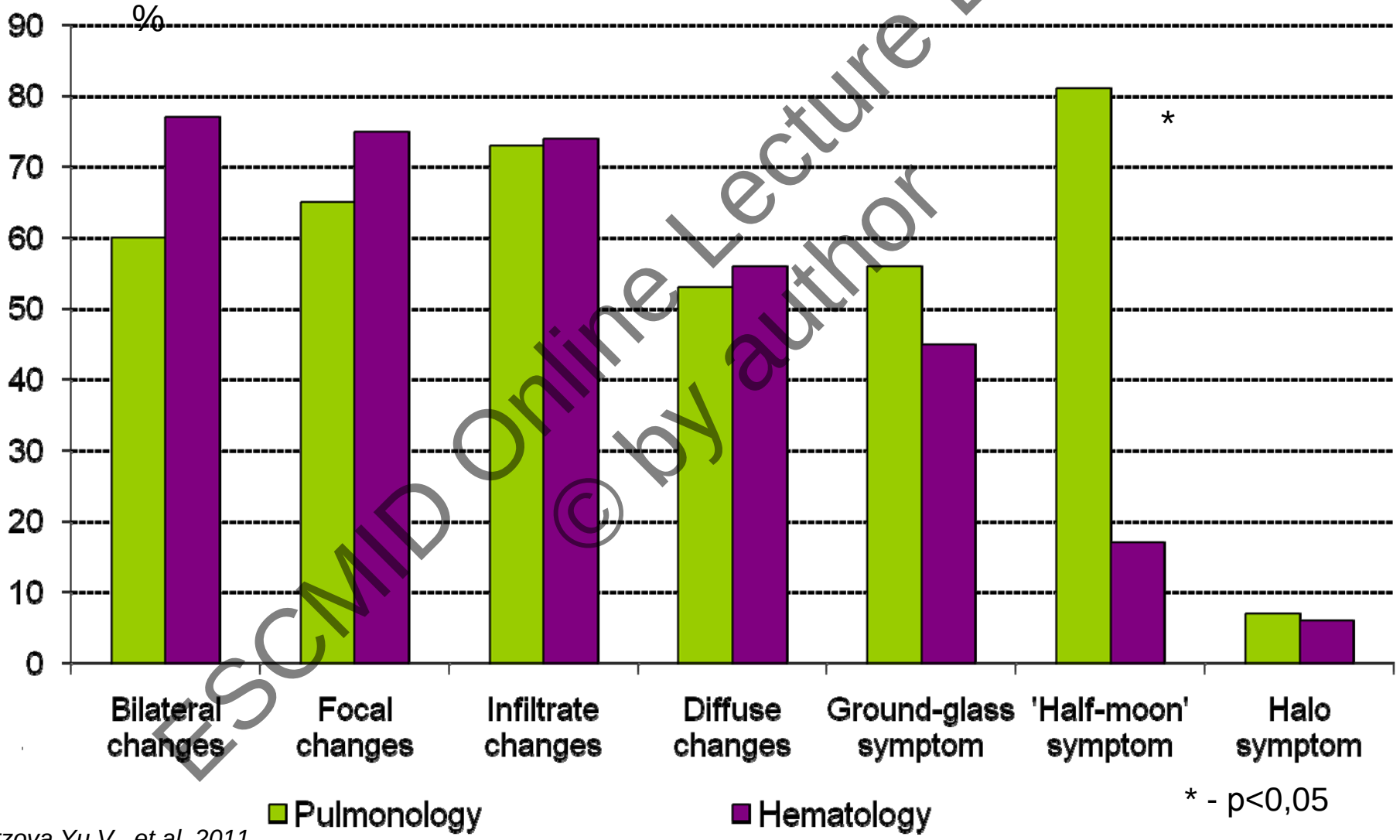
Invasive aspergillosis in Saint-Petersburg: CT scan changes



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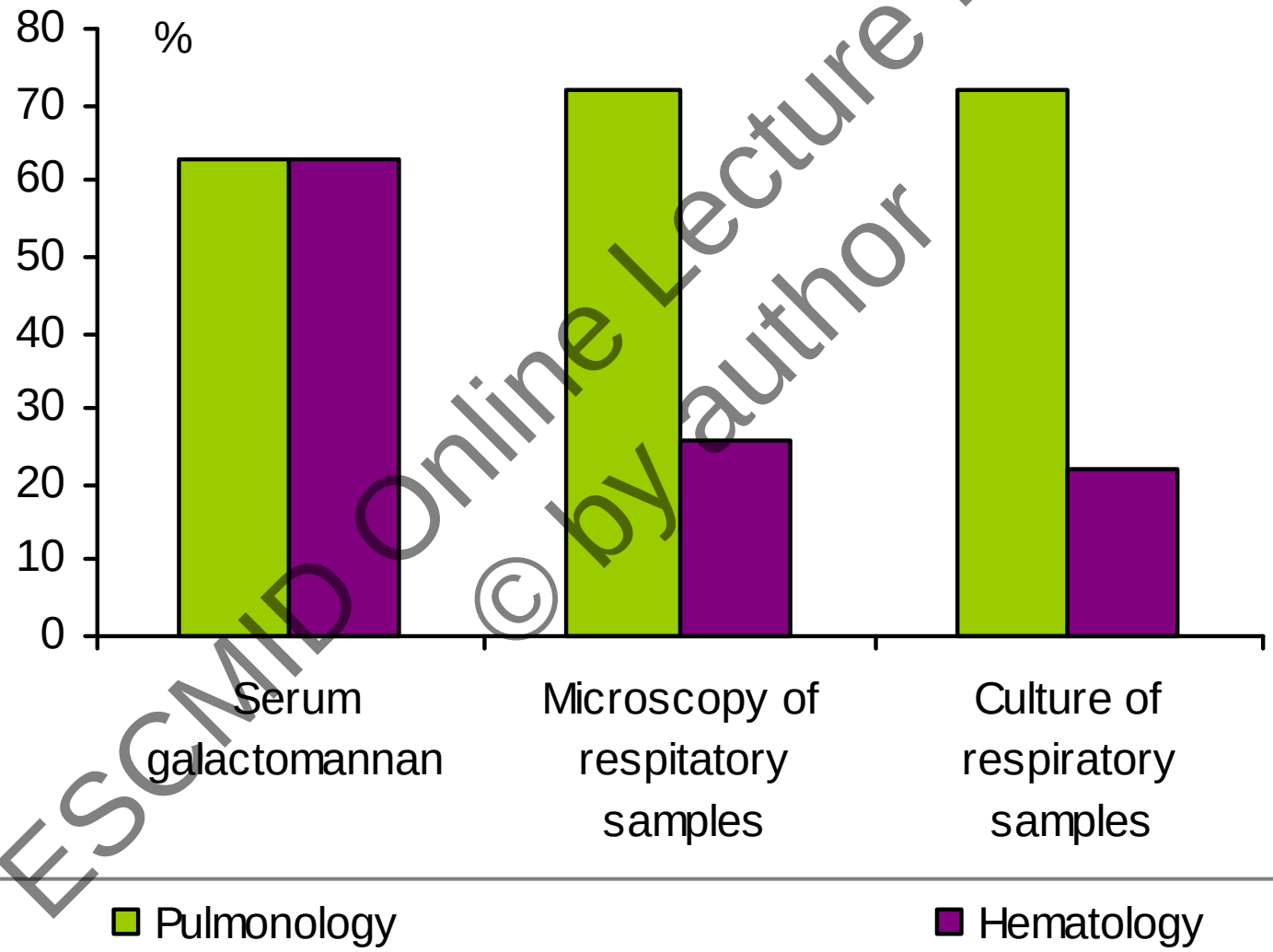
Invasive aspergillosis in Saint-Petersburg: mycological studies



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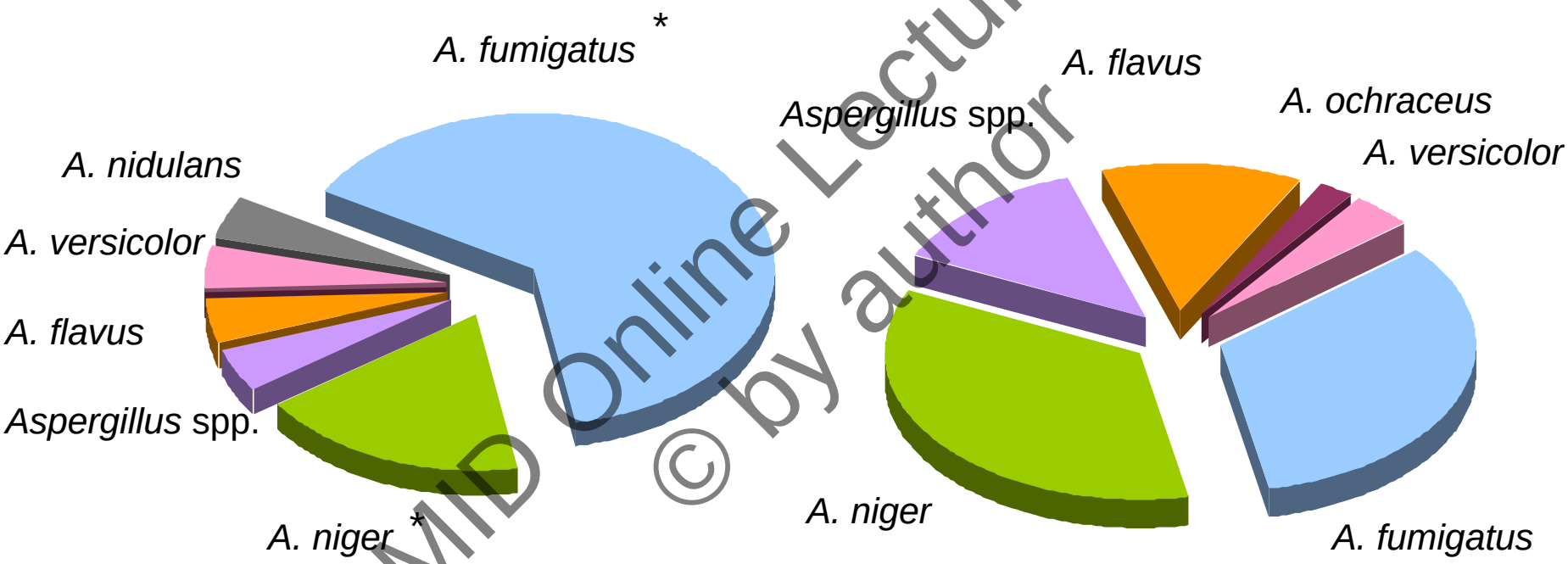
Invasive aspergillosis in Saint-Petersburg: etiology



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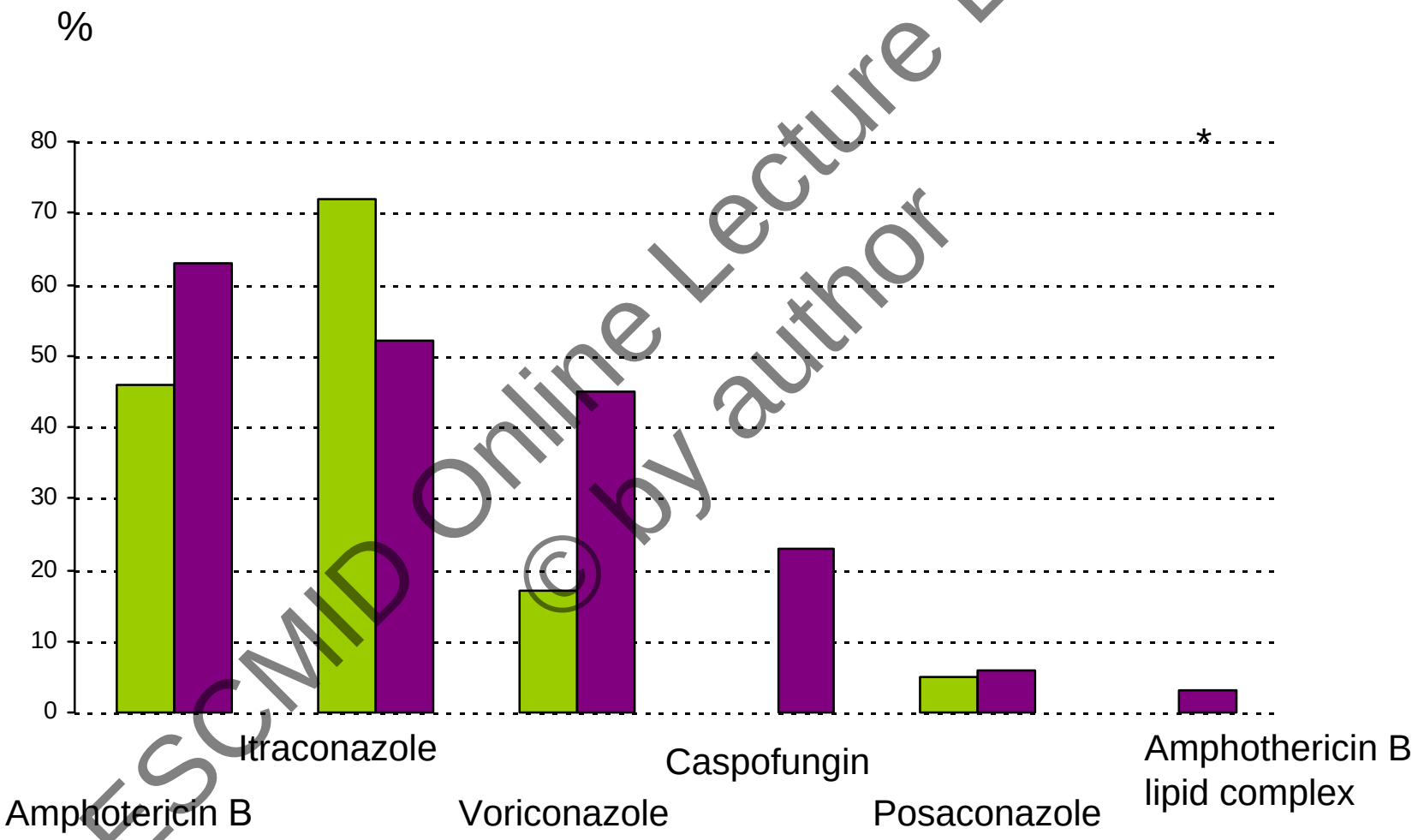
Invasive aspergillosis in Saint-Petersburg: antimycotic therapy (1998-2010)



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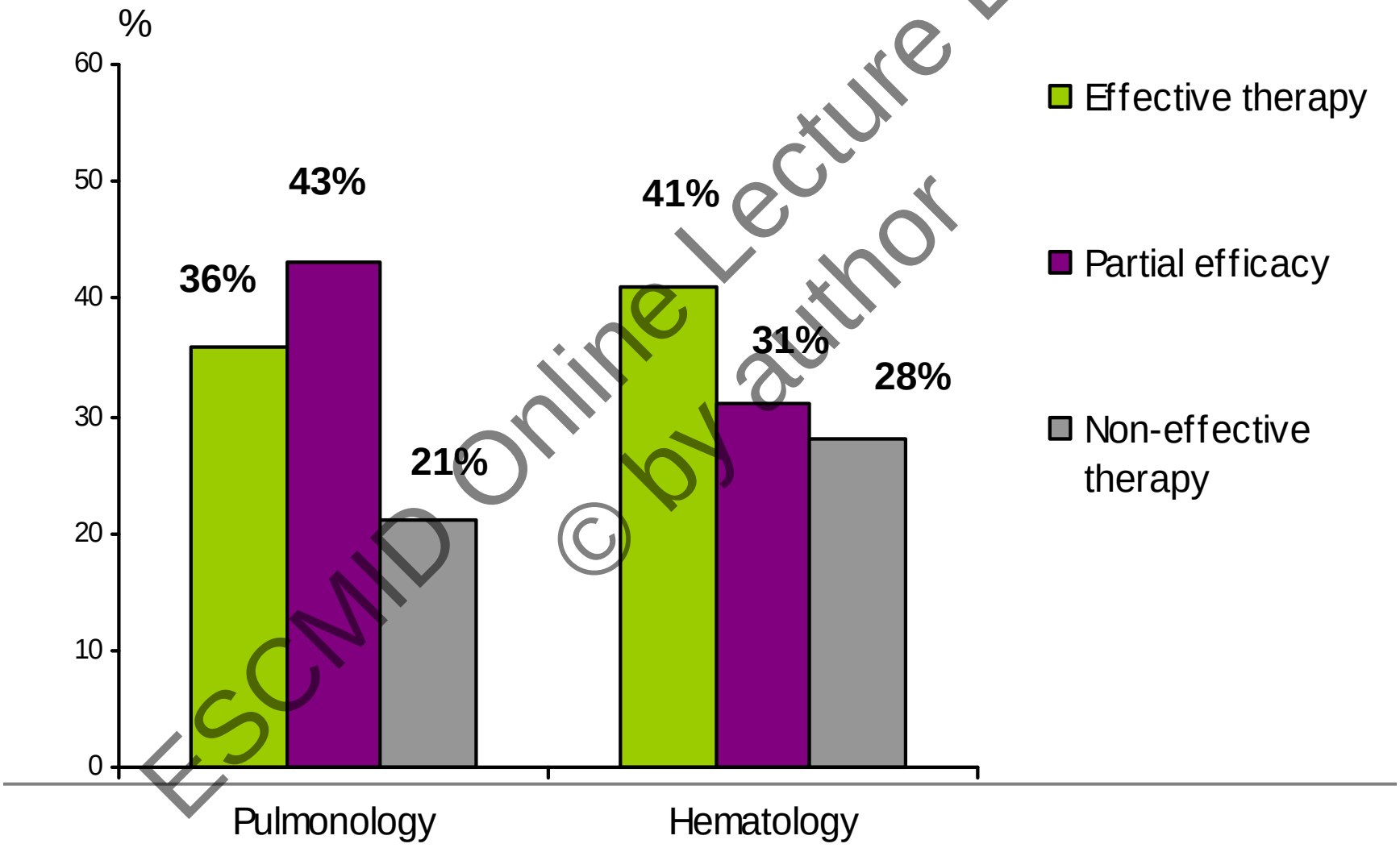
Invasive aspergillosis in Saint-Petersburg: efficacy of therapy



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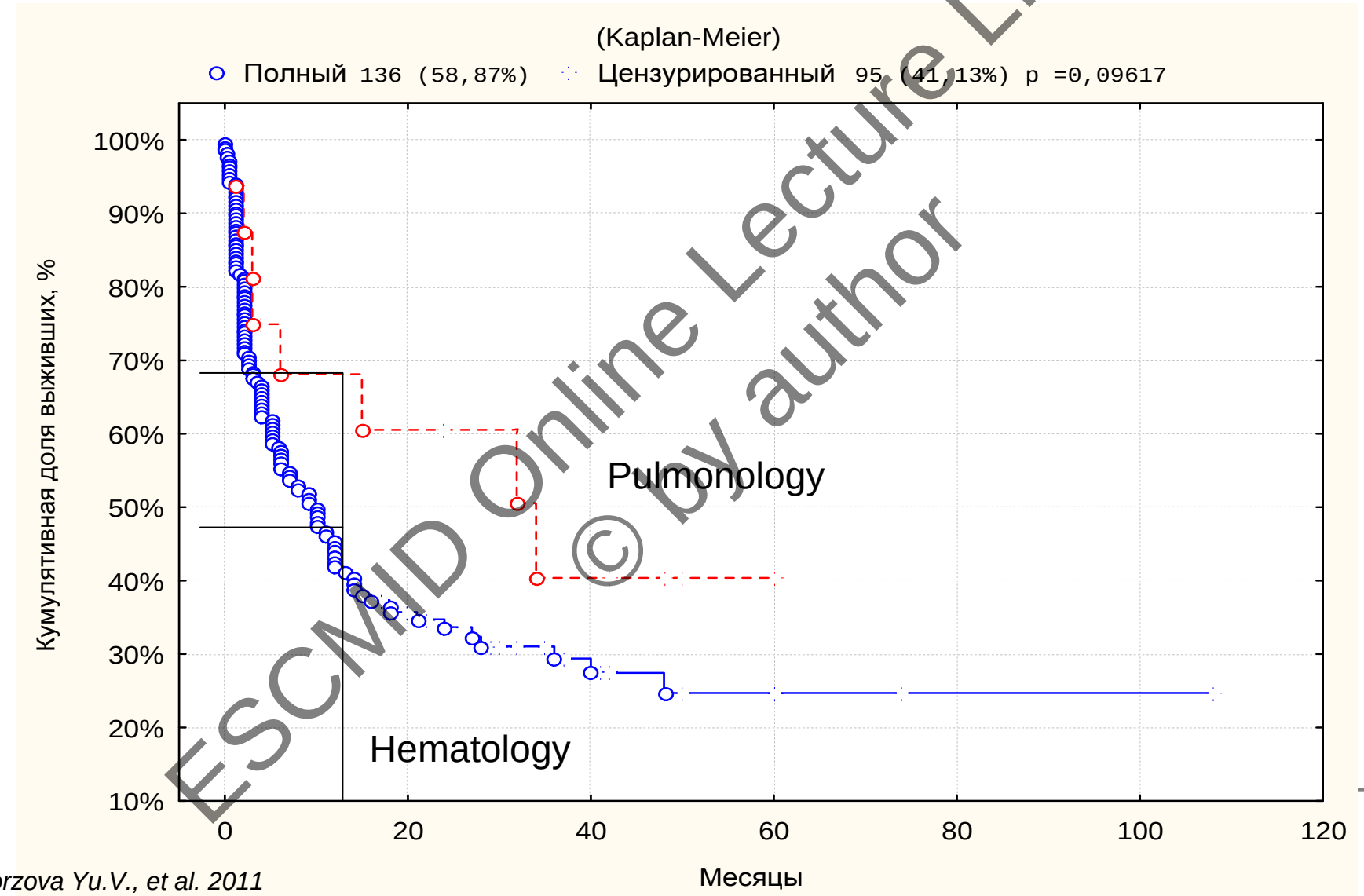
Invasive aspergillosis in Saint-Petersburg: total patient's survival



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Summary of IDSA recommendations for the treatment of aspergillosis

Conditions	Primary	Alternative	Comments
Invasive pulmonary aspergillosis	Voriconazole (6 mg/kg IV every 12 h for 1 day, followed by 4 mg/kg IV every 12 h; oral dosage is 200 mg every 12 h)	L-AMB (3–5 mg/kg/day IV), ABLC (5 mg/kg/day IV), caspofungin (70 mg day 1 IV and 50 mg/day IV thereafter), micafungin (IV 100–150 mg/day; dose not established), posaconazole (200 mg QID initially, then 400 mg BID PO after stabilization of diseased), itraconazole (dosage depends upon formulation)	Primary combination therapy is not routinely recommended based on lack of clinical data; addition of another agent or switch to another drug class for salvage therapy may be considered in individual patients

Walsh T., et al. Treatment of Aspergillosis: IDSA Clinical Practice Guidelines. Clin. Infect. Dis. 2008; 46:327–60