Educational *Programme on Transplant Infectious Diseases*

25 - 26 April 2014 - São Paulo, Brazil

ESCMID EUROPEAN SOCIETY OF CLINICAL MICROBIOLOGY AND INFECTIOUS DISEASES

Stem cell transplant
Case 1

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European Society of Clinical Microbiology and Infectious Diseases

MEDICINA USP

HC 70+30

Universidade Federal do Rio de Janeiro

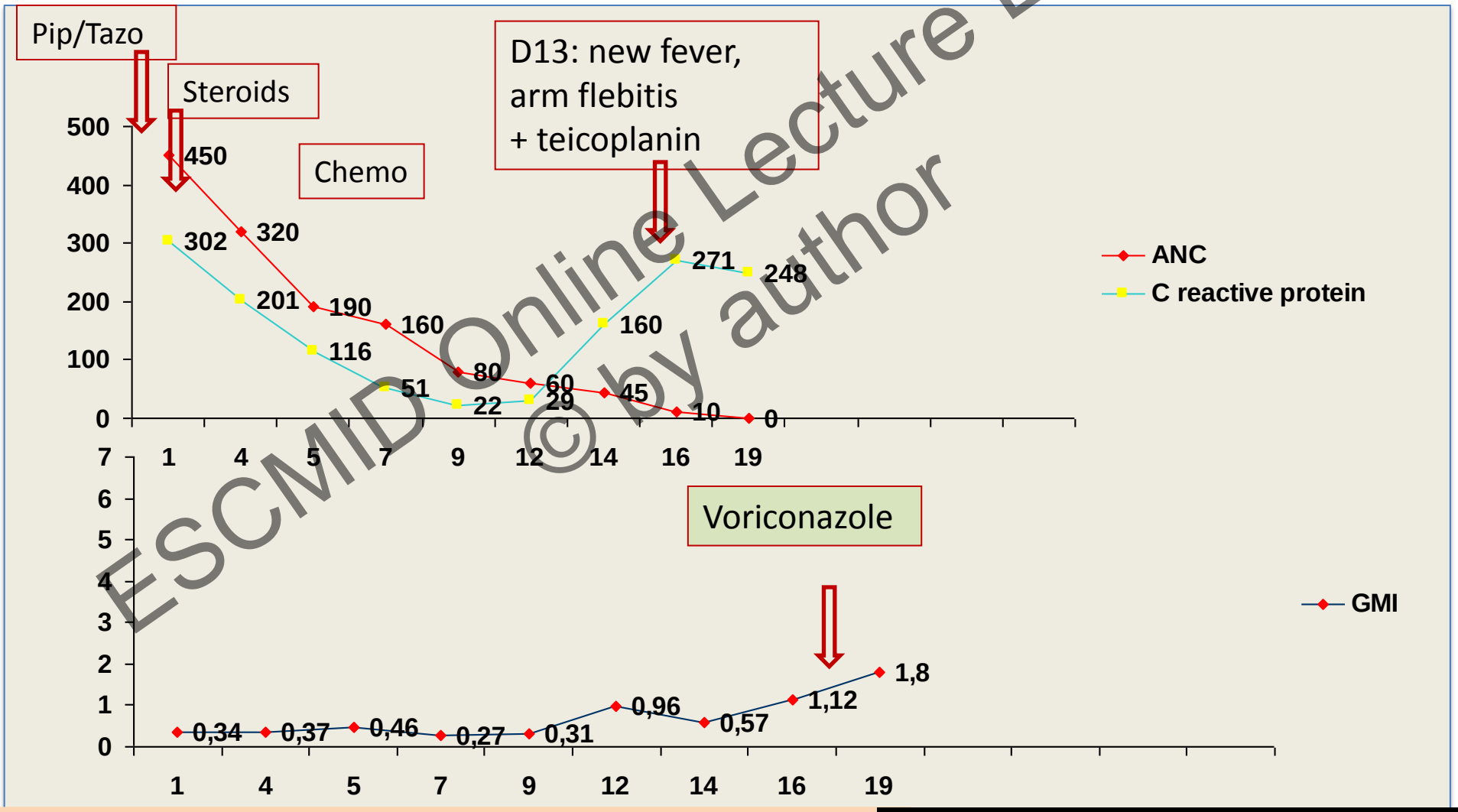
Case presentation

- 37-y old male, CML chronic phase
- Allo HCT from an HLA-matched related donor
- Chronic GVHD managed with steroids for a few months
- Complete molecular remission
- Cytogenetic relapse after 5 years, managed with TKI (imatinib)
- Admitted with pancytopenia – blast crisis (lymphoid)

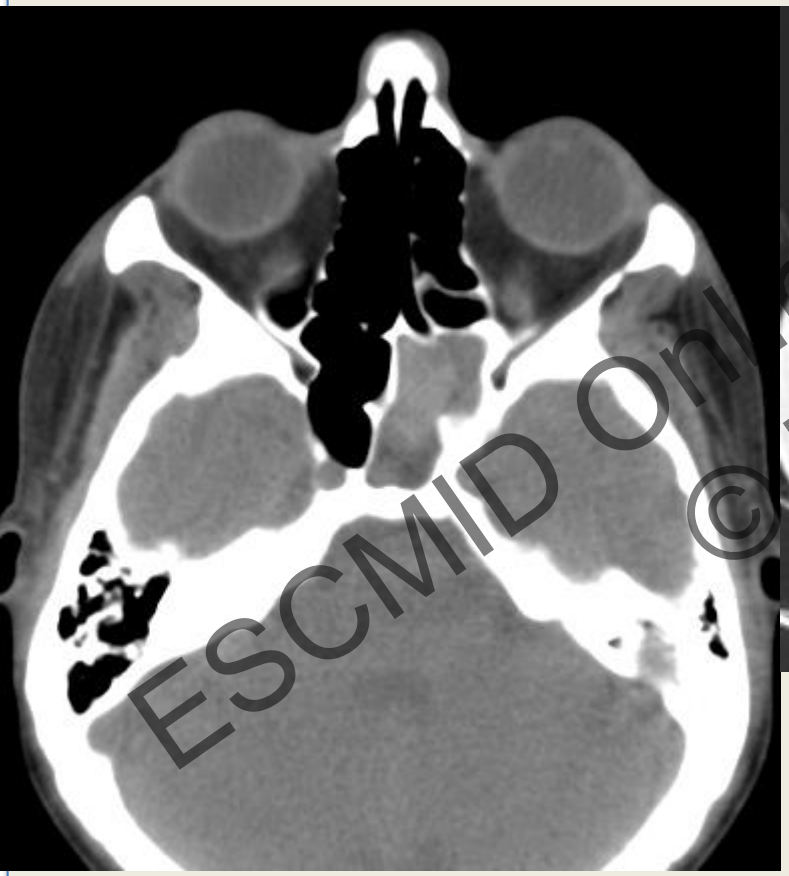
At admission

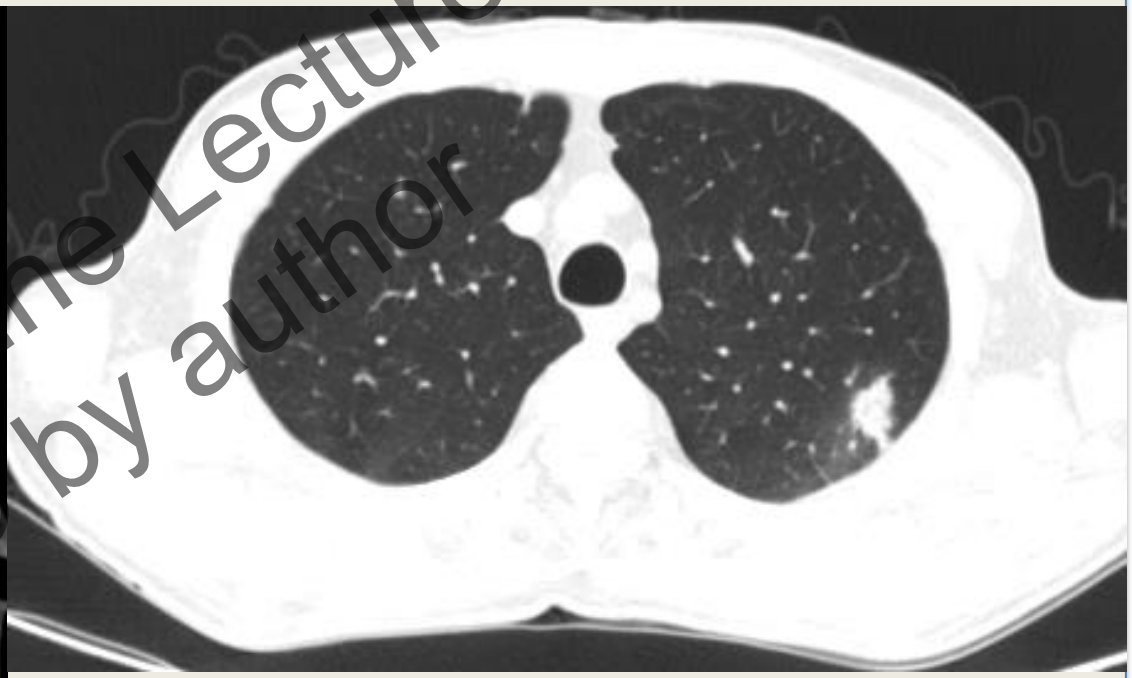
- Febrile neutropenia – Pip Tazobactan
  - No documentation of infection
  - Afebrile after 48hs.
- Started chemotherapy (Hyper-C-VAD)
- Antifungal prophylaxis (Flu 400mg daily) + screening with Galactomannan (GM) 3 times per week

Laboratory exams - Increasing GM kinetics –



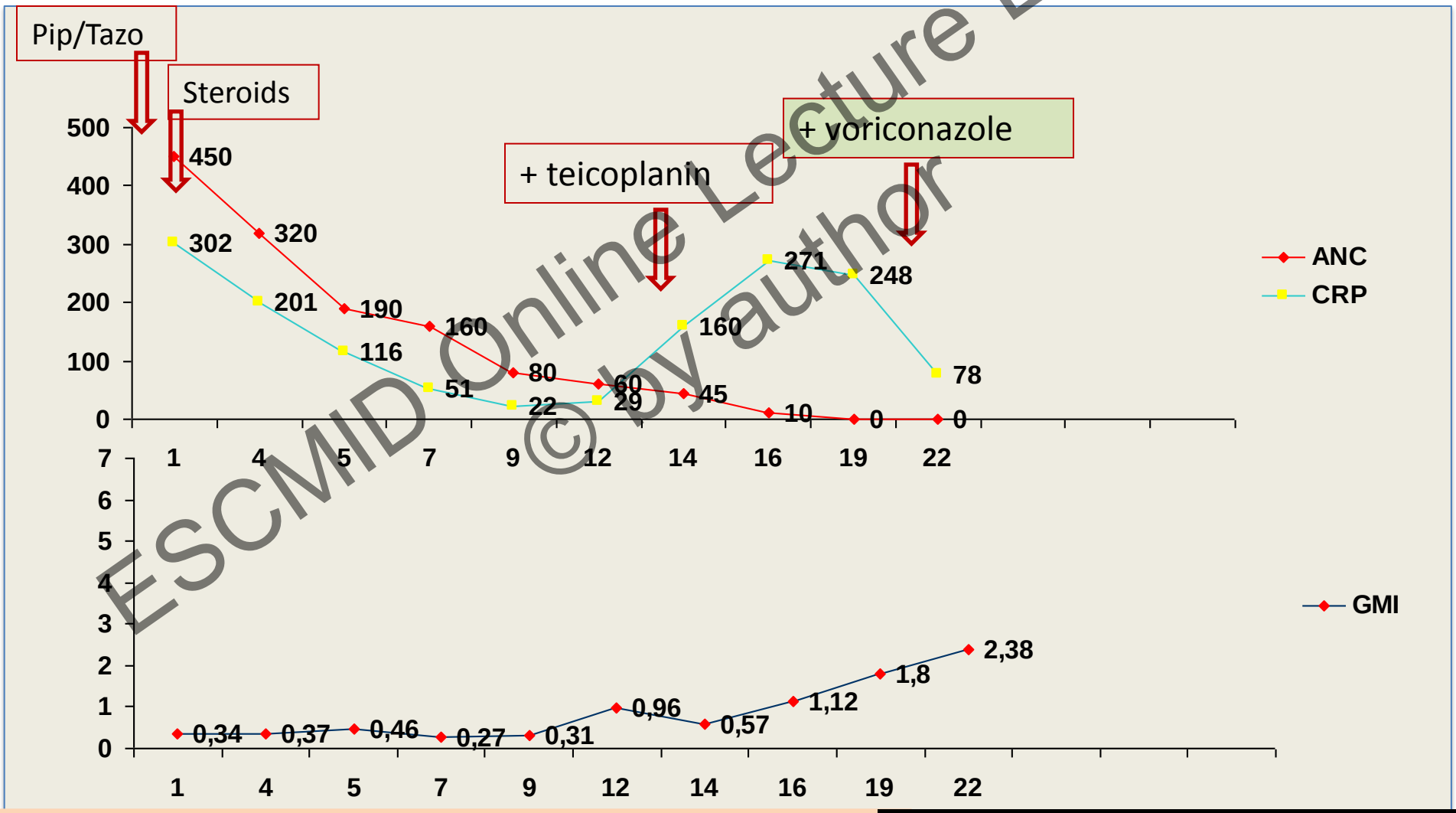
CT scan – sinusitis and a pulmonary nodule



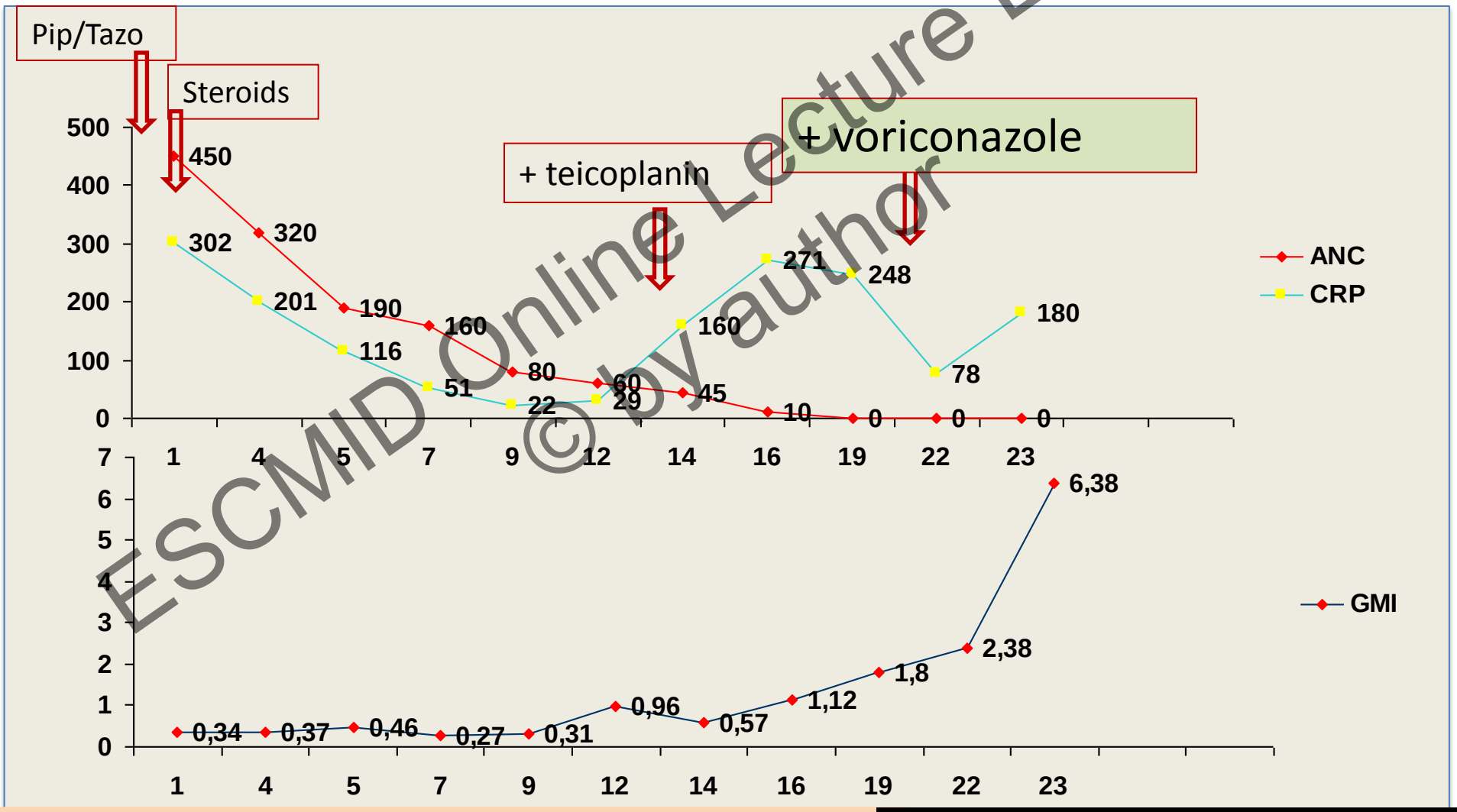


- ✓ Well-circumscribed dense lesion
- ✓ Sinusitis

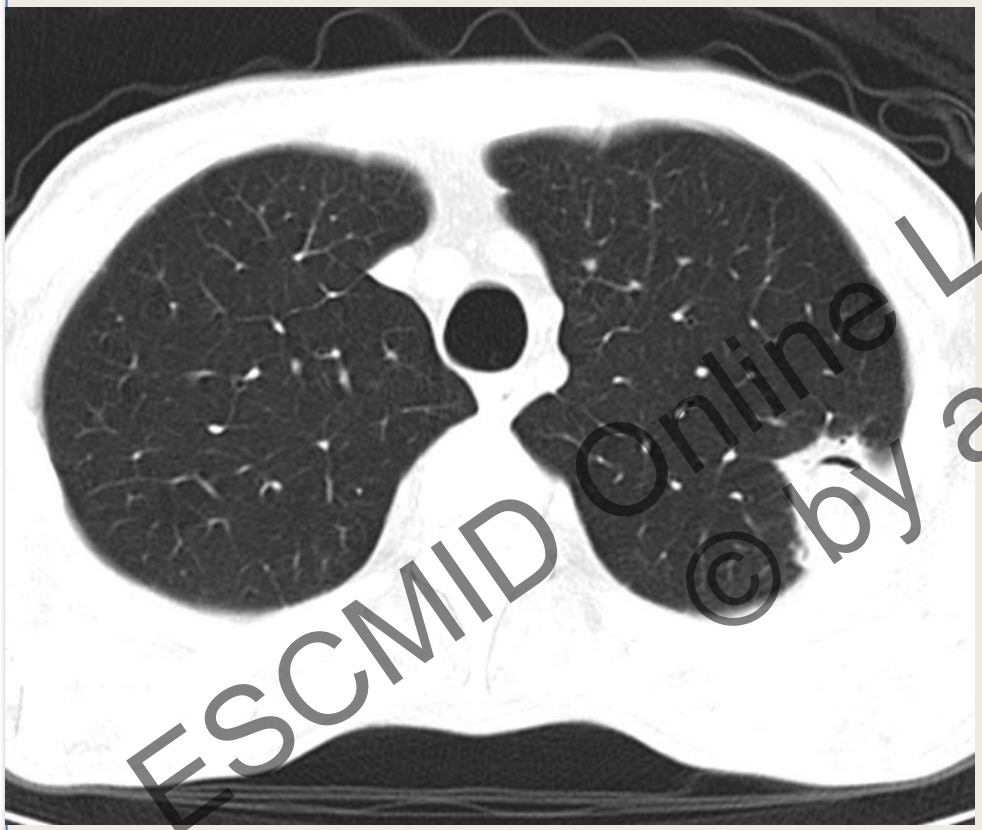
Diagnosis Invasive Aspergillosis (clinical + radiologic + mycological criteria)

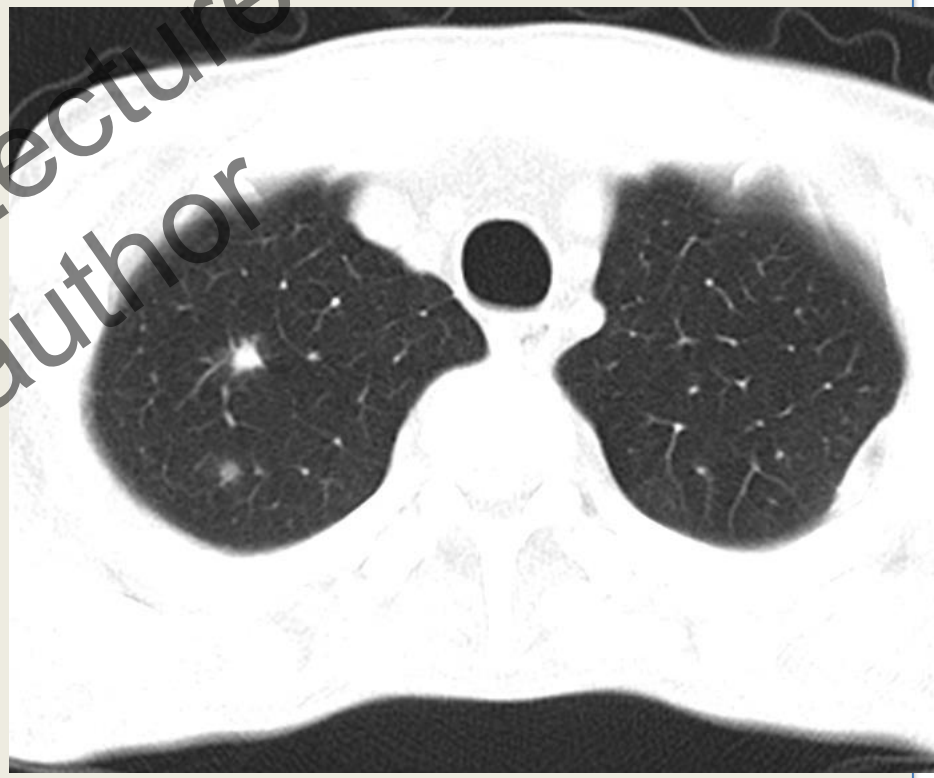


But GM remained increasing despite voriconazole... What does it mean?



Previous lesion worsening and development of new ones..





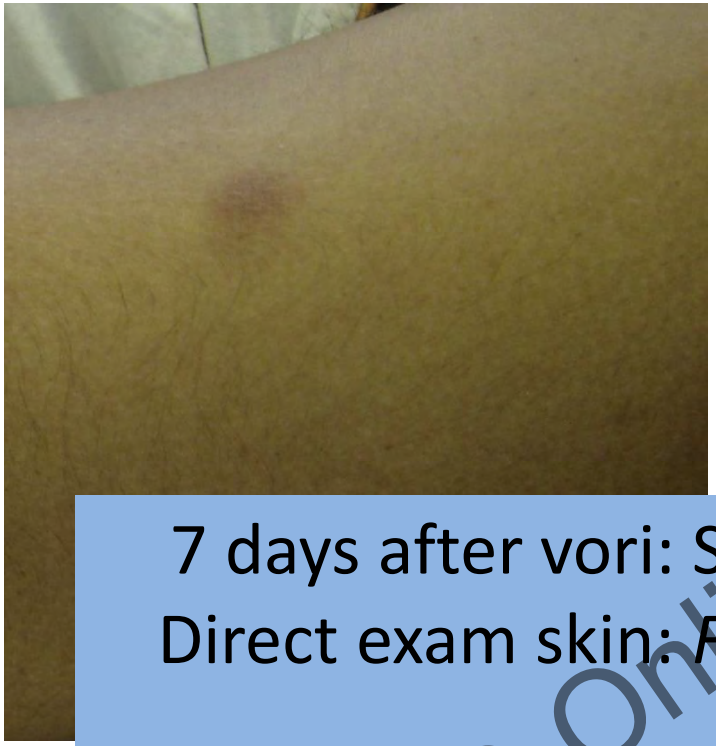
- ✓ Well-circumscribed
- ✓ Air crescent

- ✓ New well-circumscribed lesions

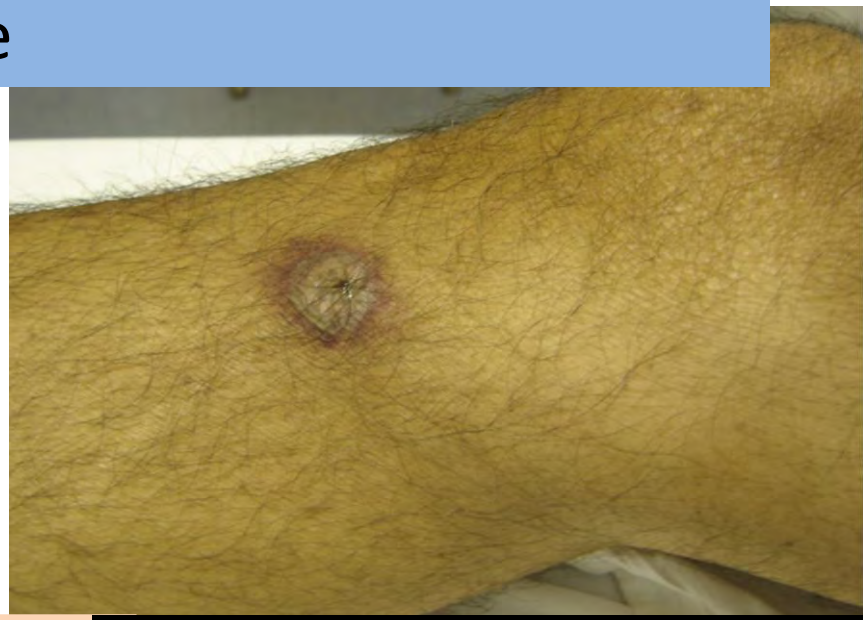
Why is it not working?

- Host ?
  - He was still neutropenic
  - But, Steroids was stopped

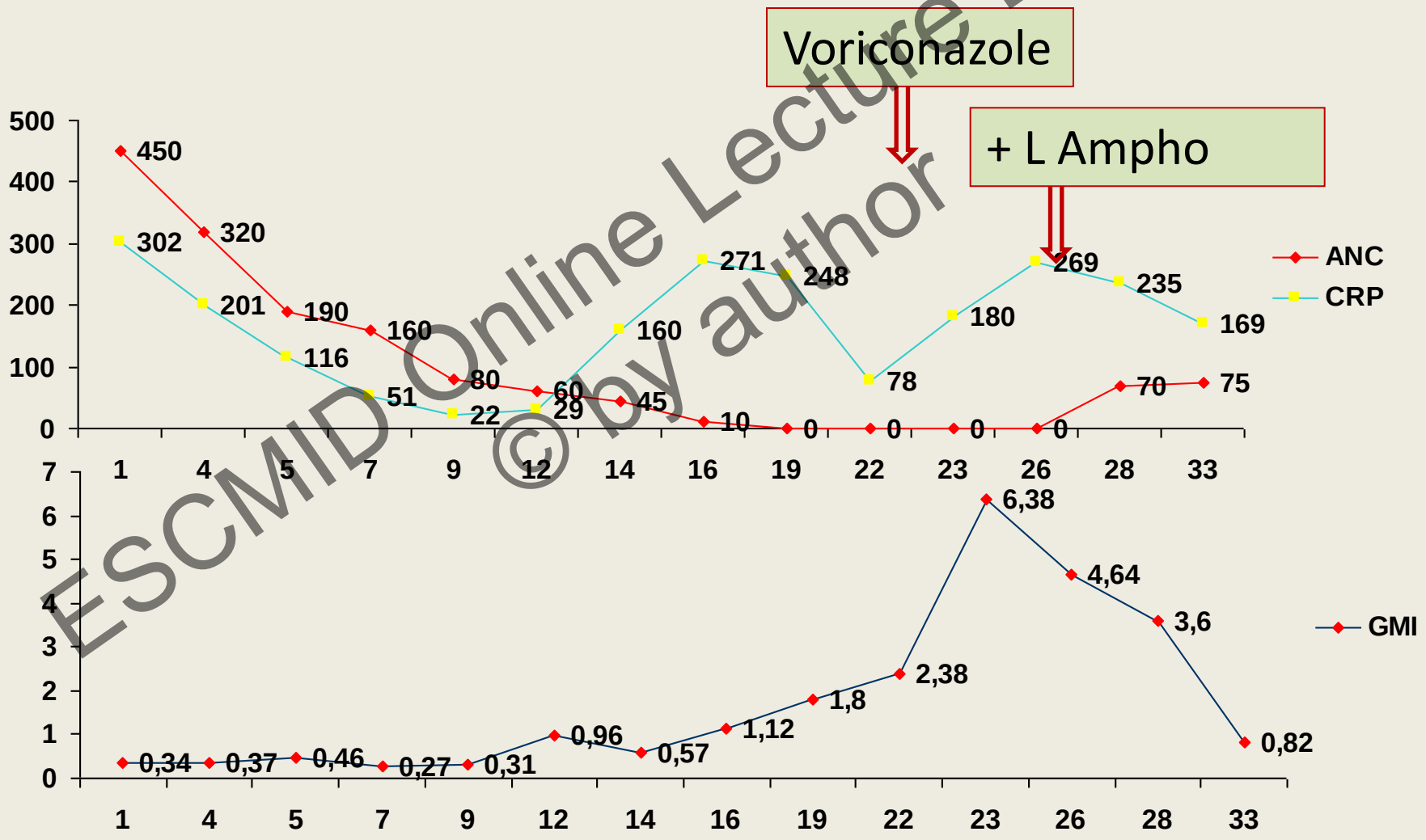
- Diagnosis?
  - Based on Antigens + image + clinical – Aspergillosis? Other??



7 days after vori: Skin Nodules with necrotic center
Direct exam skin: *Fusarium* sp. , confirmed by tissue culture



After Antifungal Combination – improved in clinics and GM kinetics.



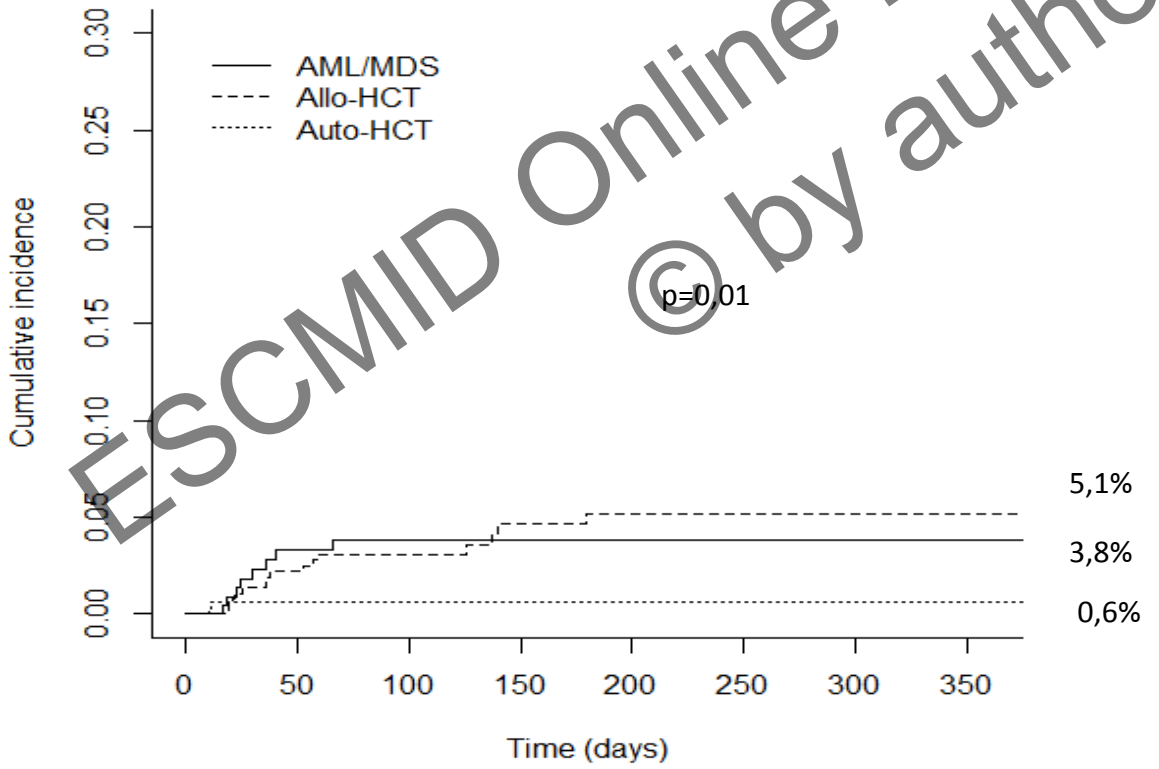
Difficulty in this case…

- Negative blood culture (fungemia in 70% of cases)
- Late onset of skin lesions
- No identification of cutaneous portal of entry
  - 14/21 cases (67%) had primary cutaneous infection

Nucci et al. CID 2004
Varon et al. Journal of Infection 2014
Campo et al. Journal of Infection 2010

Fusariosis Scenarium in Brazil Multicenter Cohort Study

- Most frequent IFD in Allo-SCT (5.2% vs. 2.3% of IA)
- Incidence in GITMO and TRANSNET 1.8% and 0.3%



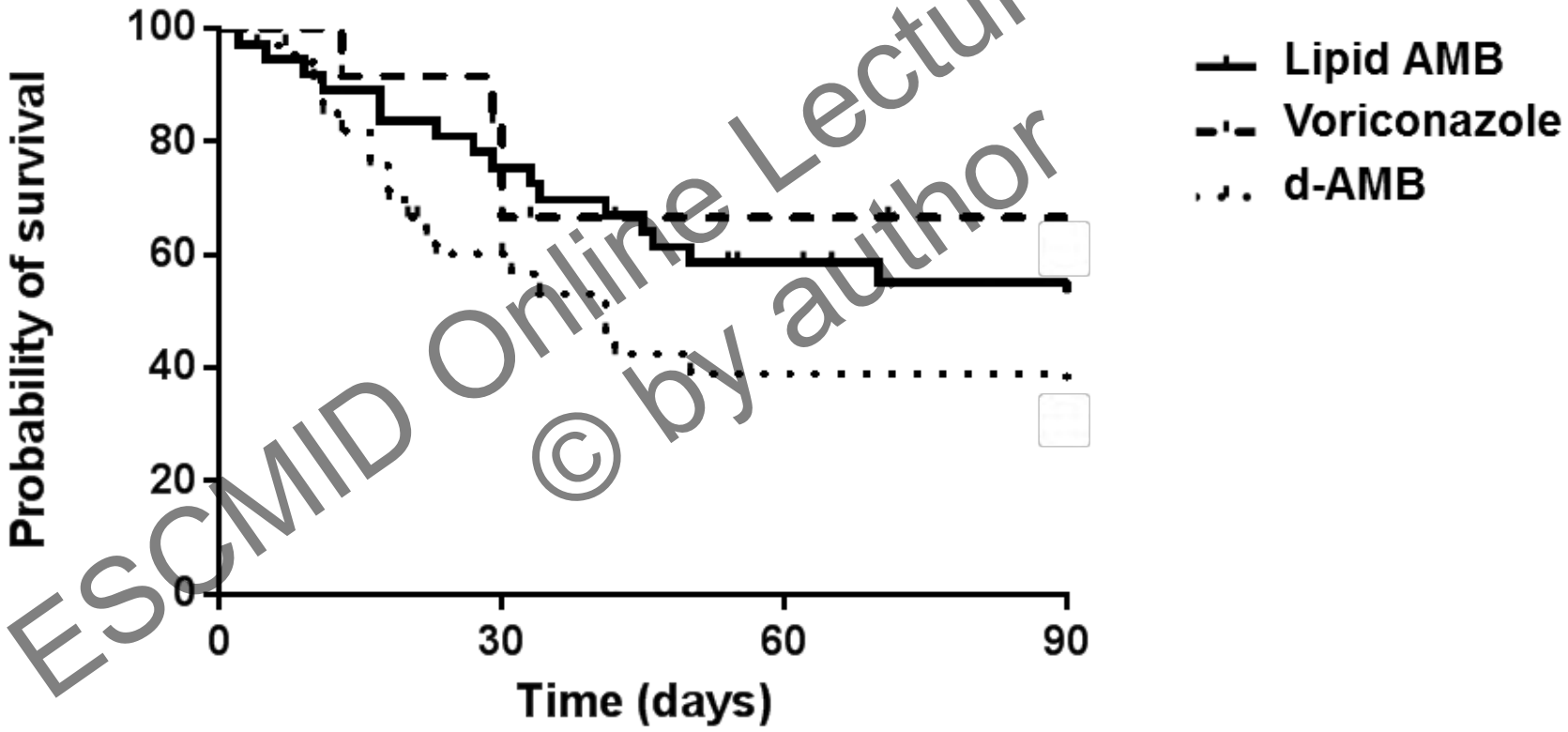
5,1%

3,8%

0,6%

Nucci et al. Clin Microbiol Infect 2013
Kontoyannis et al. CID 2010 / Park et al. Emerg Inf Dis 2011
Girmenia C et al. BBMT 2014
Nucci et al. CID 2004

Treatment Response in Invasive Fusariosis



Nucci et al. Clin Microbiol Infect 2013

Summary – Home message

- Increasing incidence in Allo SCT and AML patients, specially in Brazil
- Special attention with cutaneous portal of entry (onychomycosis, intertrigus)
- GM and D glucan can help in diagnosis/screening
  - BUT Search for the fungus! May be it is not Aspergillus!
- Prognosis largely dependent on the immune status of the host