



NE, NERDE, NE ZAMAN?

2009/02

Dr. Hamdi Akan

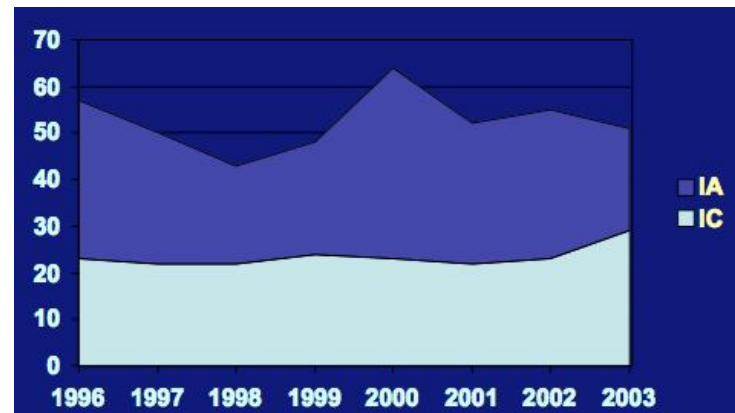
Epidemiology of Invasive Candidiasis: a Persistent Public Health Problem

Pfaller and Diekema Clin. Microbiol. Rev..2007; 20: 133-163

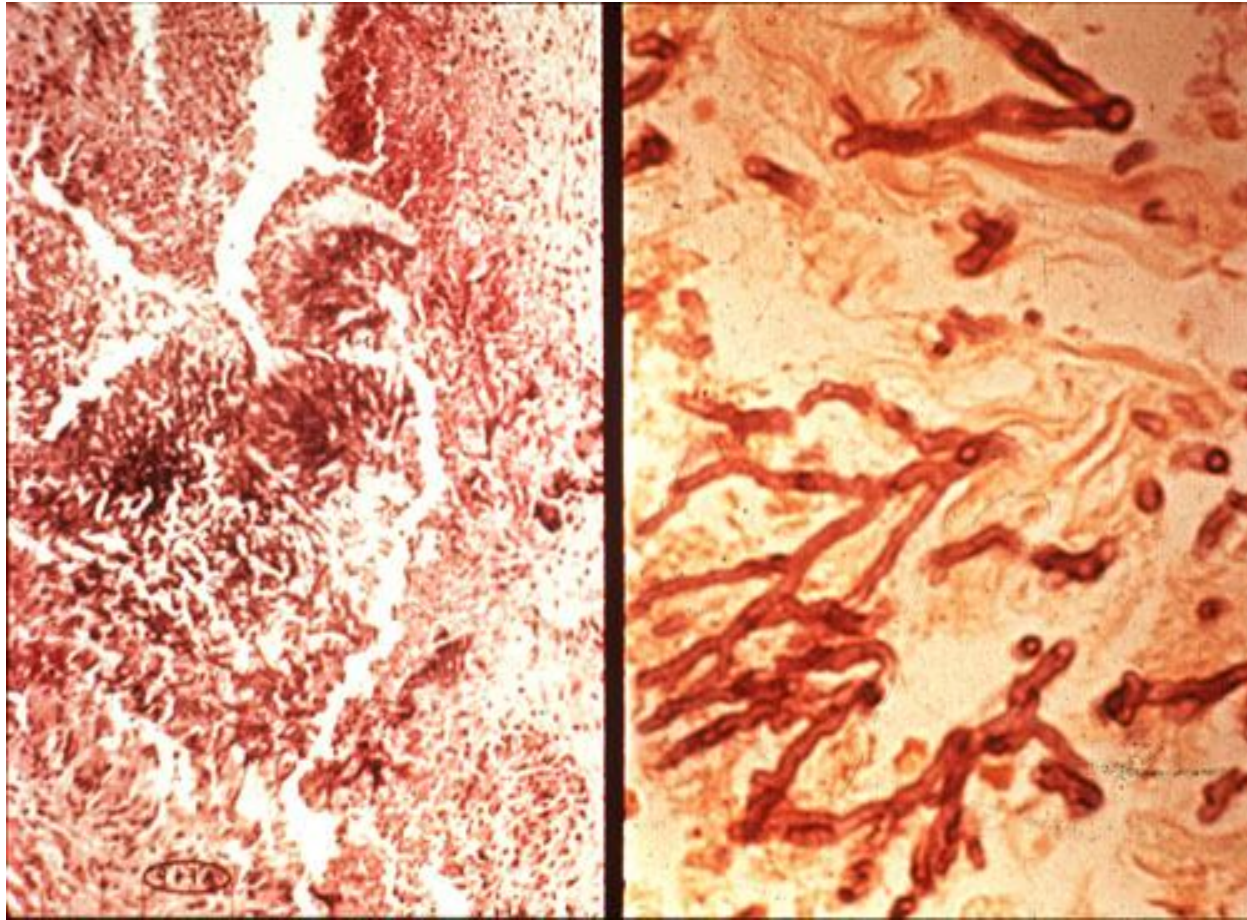
TABLE 4. Incidence of IC and IA in the United States^a

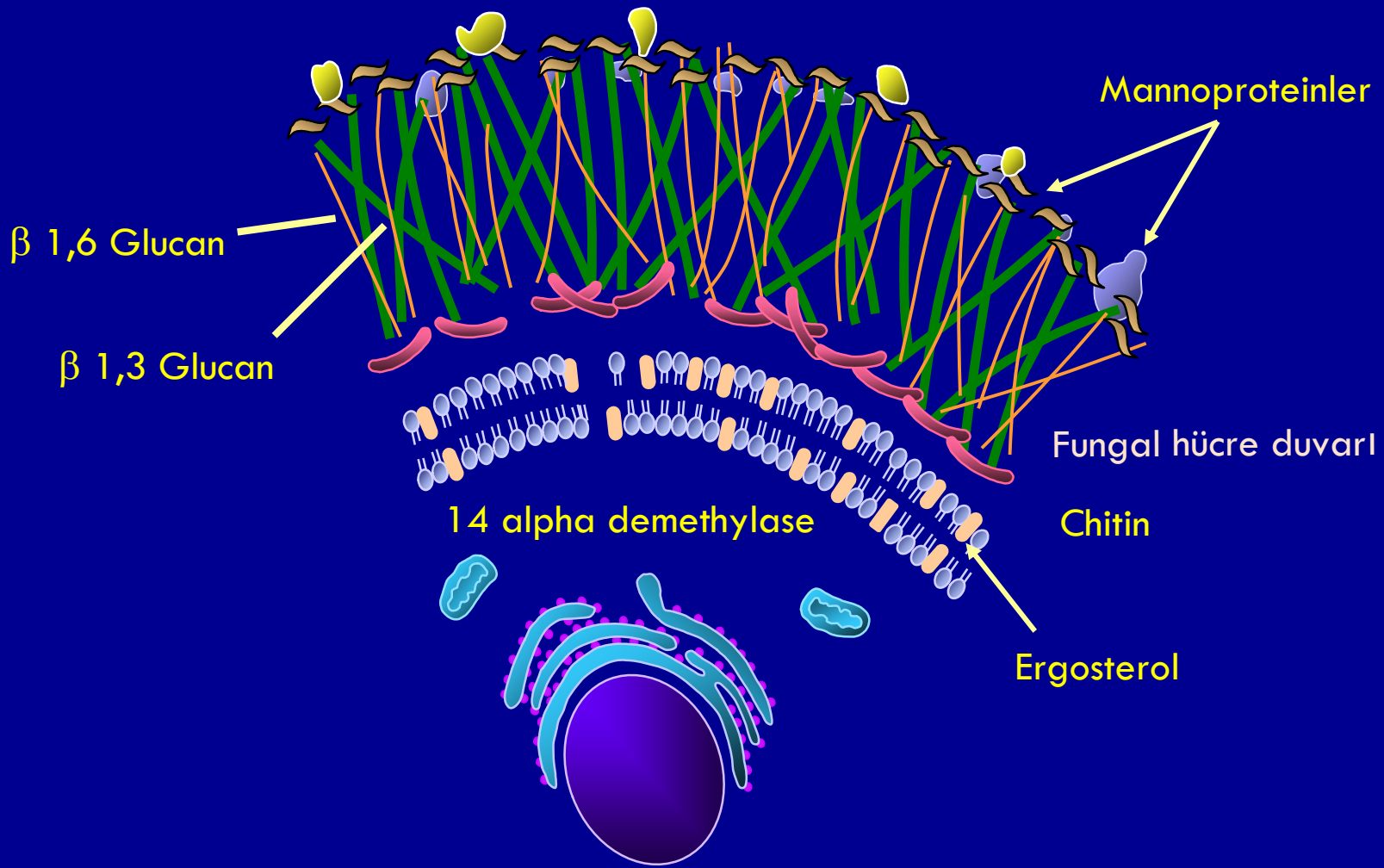
Parameter	Infection	Incidence rate per yr							
		1996	1997	1998	1999	2000	2001	2002	2003
Incidence rate per 100,000 U.S. population	IC	23	22	22	24	23	22	23	29
	IA	3.4	2.8	2.1	2.4	4.1	3.0	2.6	2.2
Incidence rate per 10,000 hospital discharges	IC	20	19	19	20	20	19	20	24
	IA	3	2	2	2	4	3	2	2

^a Data are taken from the NHDS, 1996–2003 (<http://www.cdc.gov/nchs/>).










(1-3)- β -D-glukan (G-testi)

FUNGAL INFECTION RESEARCH



**How Much Glucan Do You Have?
Find out with GlucateLL™**

Introducing GlucateLL - A Direct Assay for (1,3)- β -D-Glucan

GlucateLL is ideal for:

- Analyzing serum glucan levels during fungal infection in research models
- Monitoring anti-fungal therapy effectiveness
- Detection of the cessation of (1,3)- β -D-Glucan synthesis in response to anti-fungal drugs including azoles and polyenes
- High-Throughput screening

The GlucateLL Assay:

- Specific for (1,3)- β -D-Glucan
- Pg/mL level sensitivity
- Easy to use 96-well plate format
- Available in endpoint or kinetic method
- Kit includes all reagents and (1,3)- β -D-Glucan standard

GlucateLL is for Research Use Only and is not for use in diagnostic procedures.

**ASSOCIATES OF
CAPE COD
INCORPORATED**
704 Main Street • Falmouth, MA 02540
Tel: (508) 540-3444 or (800) LAL-TEST
Fax: (508) 540-8680
ISO 9001 Registered

www.acciusa.com

- *Aspergillus*'a özgü değil
- Araştırma aşamasında
- Sınırlı veri

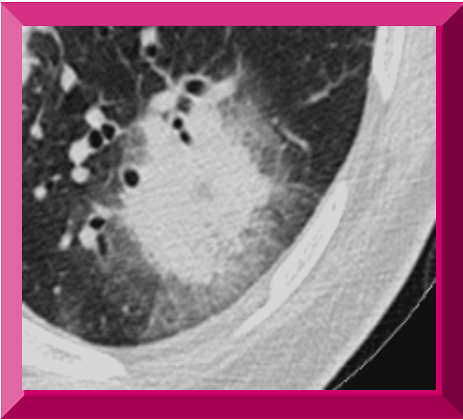
- duyarlılık %67
özgüllük %84

Kami et al. Nippon Ishinkin Gakkai Zasshi 2001; 42: 181

İnvazif Aspergillozda BT Bulguları

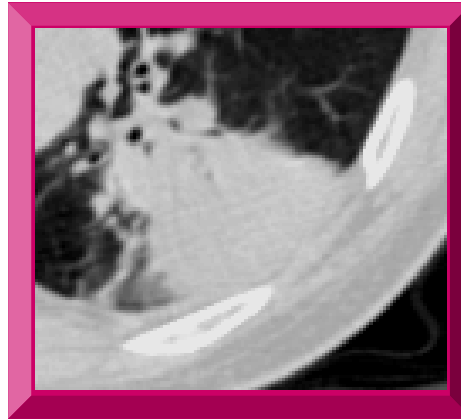
Halo belirtisi

0 - 5 g



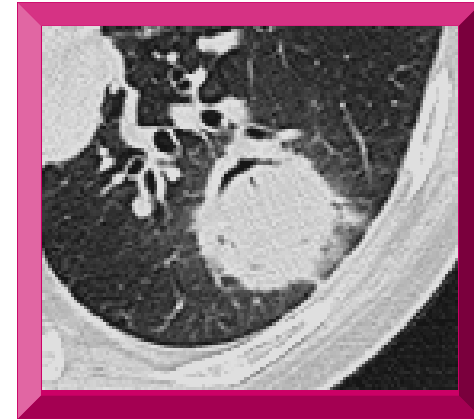
Konsolidasyon

5 - 10 g



Hava-hilal belirtisi

10 - 20 g



Nötropeni

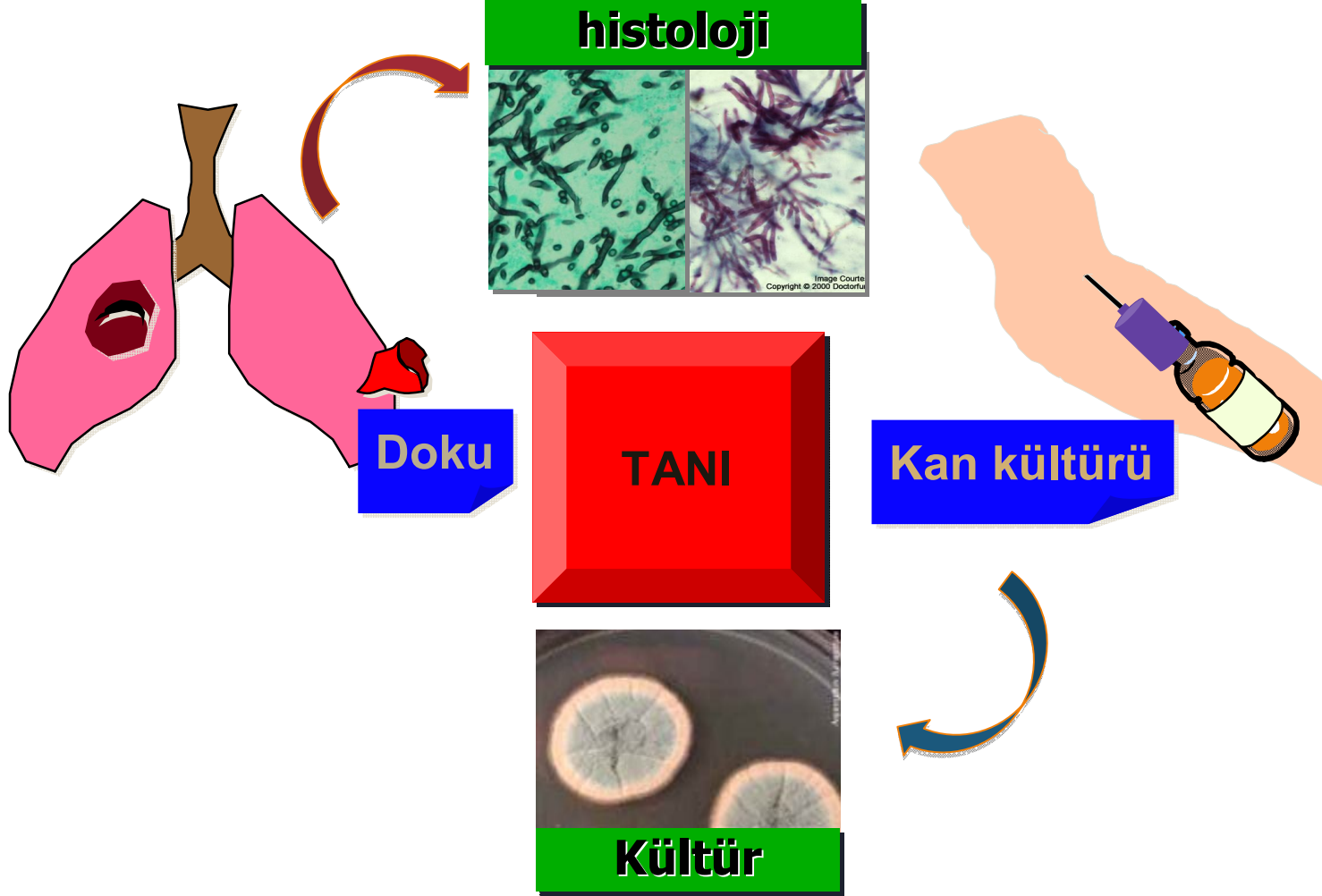
Galactomannan and Computed Tomography–Based Preemptive Antifungal Therapy in Neutropenic Patients at High Risk for Invasive Fungal Infection: A Prospective Feasibility Study

Johan Maertens,¹ Koen Theunissen,¹ Gregor Verhoef,¹ Johnny Verschakelen,² Katrien Lagrou,³ Eric Verbeken,⁴ Alexander Wilmer,⁵ Jan Verhaegen,³ Marc Boogaerts,¹ and Johan Van Eldere³

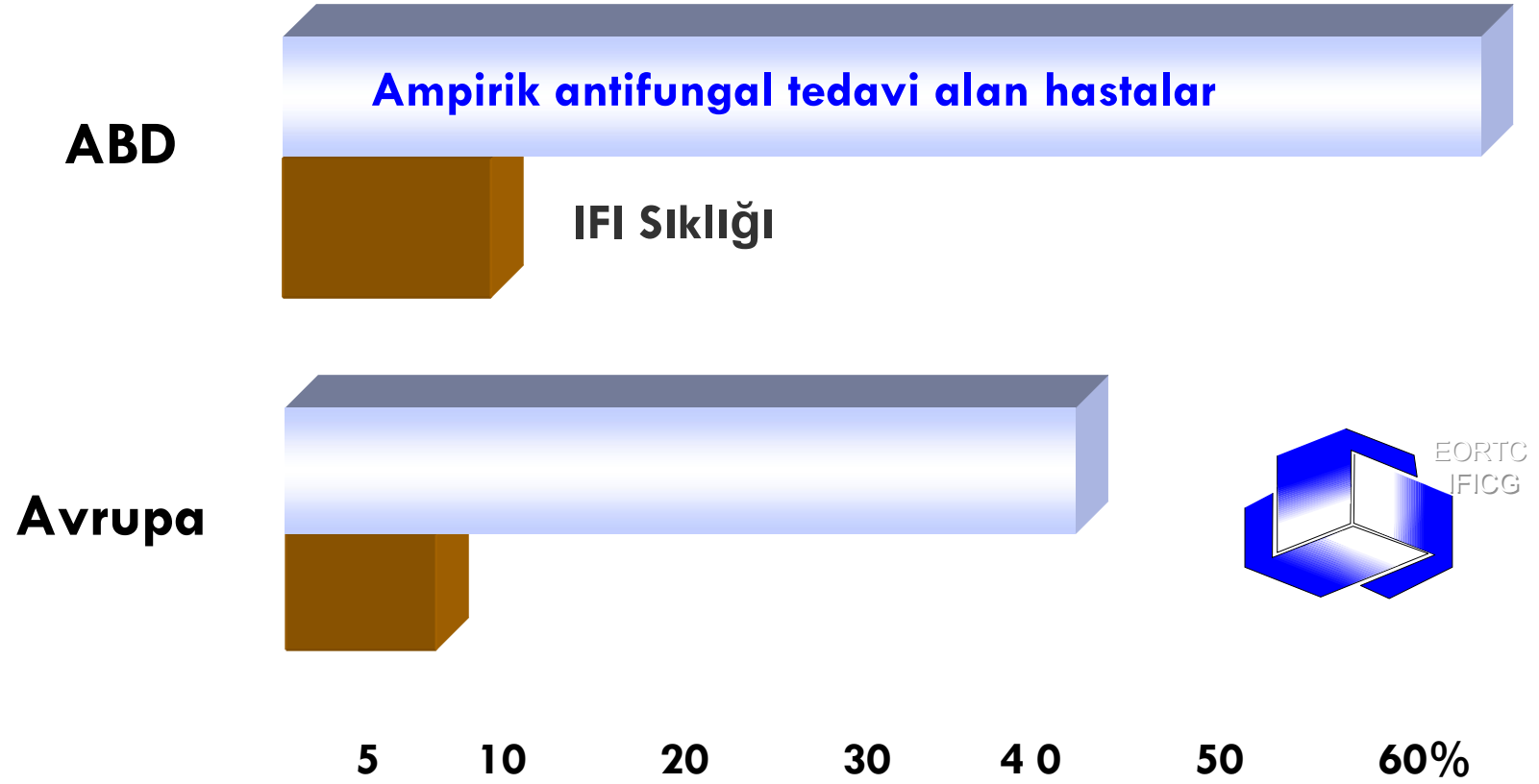
Table 2. Data for treatment episodes for persons who were at risk of acquiring invasive fungal infection and who had positive EIA results.

Category, ^a episode	Diagnostic criterion or criteria	BAL finding ^b	CT findings, by scan			No. of EIA-positive serum samples, by OD index cutoff			Radiological response ^c	Serological response	Survival ^d	Response of underlying disease
			At first positive EIA result	Subsequent scan	No. of samples	≥0.5	≥1.0	≥1.5				
Proven IA												
1	Autopsy and culture	NFP	Halo sign	AC sign	71	61	60	58	SD	↓	Death	Ref
2 ^e	Autopsy and culture	NFP	Halo sign	...	24	11	5	3	SD	↓	Death	Ref
3	Autopsy	<i>Aspergillus fumigatus</i>	Halo sign	...	29	14	9	7	Failure ^f	↑	Death	Ref
4	Sterile site culture	<i>A. fumigatus</i>	Pneumothorax	Cavern	33	26	12	7	PR	–	Alive	1st CRem
5 ^e	Autopsy and culture	NFP	Halo sign	AC sign	52	27	21	19	SD	–	Death	Sec GF residual
6	Biopsy	<i>A. fumigatus</i>	Halo sign	AC sign	71	34	14	2	SD	↓	Death	2nd CRem
7	Autopsy and culture	<i>A. fumigatus</i>	–	Nodular lesion	40	8	3	3	Failure ^f	↑	Death	2nd CRem
Probable IA												
8	GM and HRCT	NFP	–	Halo sign	52	33	14	2	CR	–	Alive	2nd CRem
9	GM and HRCT	NFP	Halo sign	...	26	5	2	1	PR	–	Alive	2nd CRem
10	GM and HRCT	NFP	–	Halo sign	52	27	9	1	CR	–	Alive	Ref
11	GM, HRCT, and culture	<i>A. fumigatus</i>	Halo sign	AC sign	96	66	39	27	PR	–	Alive	3rd CRem
12	GM and HRCT	NFP	Halo sign	AC sign	28	2	0	0	PR	–	Alive	Residual
13	GM and HRCT	NFP	Halo sign	AC sign	85	32	7	3	SD	–	Death	Ref
14	GM and HRCT	Not done	Halo sign	...	42	3	0	0	CR	–	Alive	1st CRem
15	GM and HRCT	NFP	Halo sign	...	83	16	0	0	CR	–	Alive	Residual
16	GM and HRCT	Not done	–	...	35	8	0	0	CR	–	Alive	Ref
17	GM, HRCT, and culture	<i>A. fumigatus</i>	Halo sign	AC sign	19	10	4	1	CR	–	Alive	2nd CRem
18	GM and HRCT	NFP	Halo sign	AC sign	46	24	31	19	SD	↓	Alive	3rd CRem
19	GM and HRCT	NFP	Consolidation	AC sign	35	2	1	1	PR	–	Alive	1st CRem

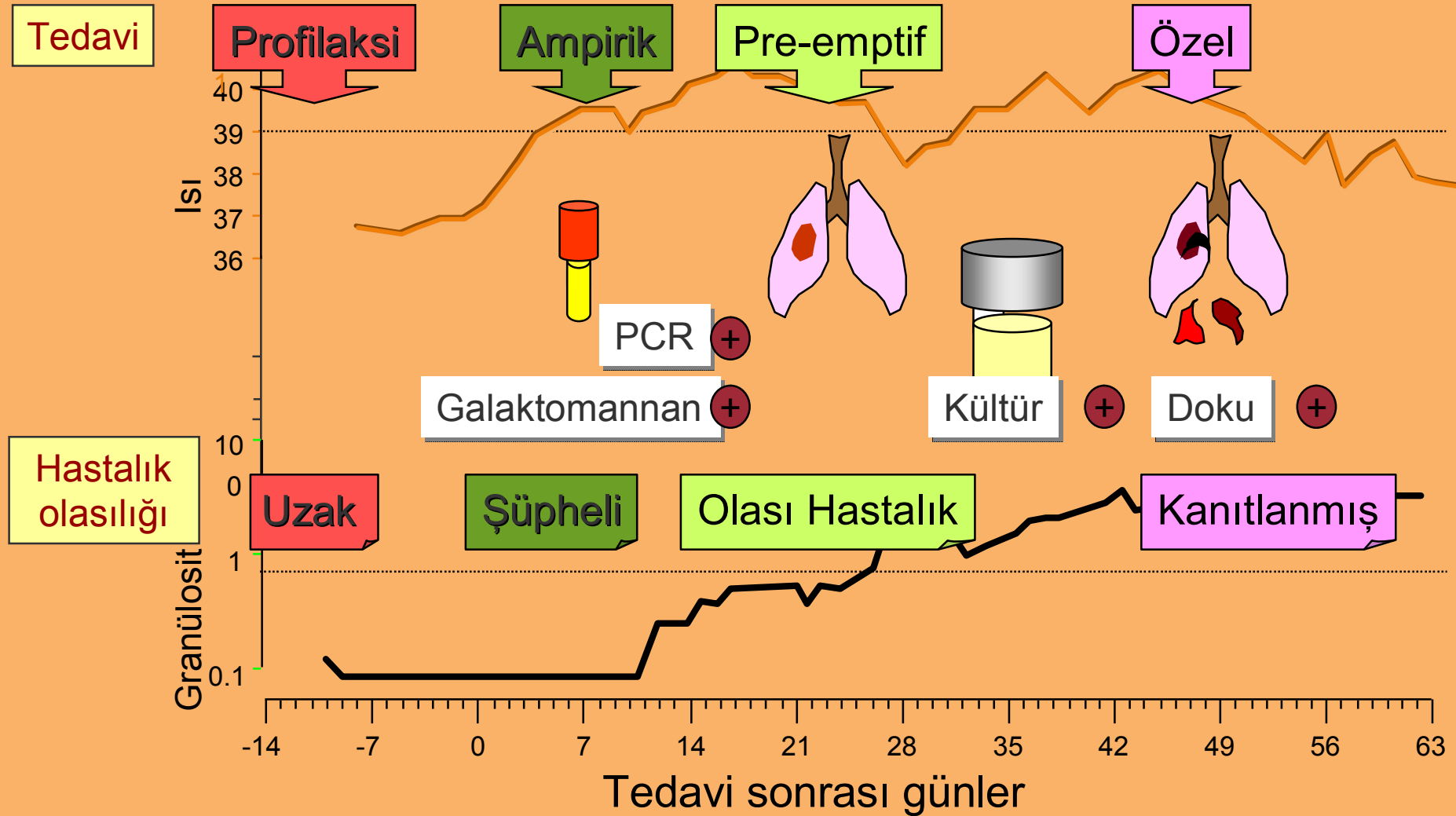
Kanıtlanmış İnvazif Fungal Hastalık



Febril Nötropenik Hastalarda Ampirik Antifungal kullanımı



TEDAVİ YAKLAŞIMLARI



Febril nütropenik hasta
Uzamış ateş - GÜN 5-7

Stabil hast.
Düşük risk

Yüksek risk.
Uzun sürecek nütropeni

2 ardarda GM (+)
veya HRCT (+)

2 ardarda GM (+)
veya HRCT (+)

OLASI/KESİN IFI

Fungal infeksiyon kanıtı
yok
GM (-) HRCT (-)

ANC artıyor
GM (-) HRCT (-)

Voriconazole
Lipozomal Amfo-B
Caspofungin

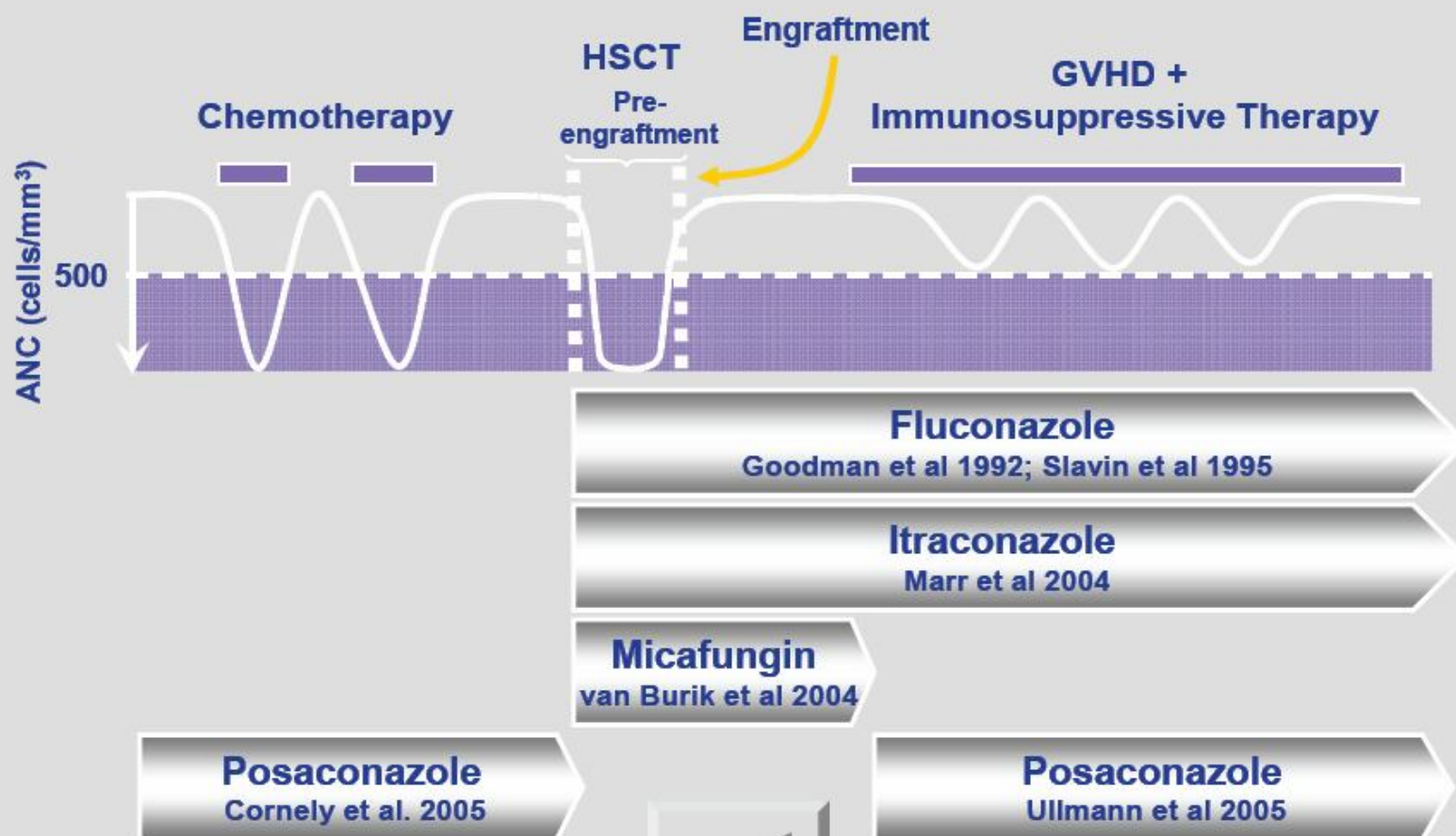
GM ve HRCT
ile izle

Lipozomal Amfo-B
Caspofungin

Antibiotiklere devam

Oral Voriconazole ile devam et

Prophylaxis In Hematopoietic Stem Cell Recipients Overview of Studies



Goodman JL et al. *N Engl J Med.* 1992;326:845-851.
 Slavin MA et al. *J Infect Dis.* 1995;171:1545-1552.
 van Burik JA et al. *Clin Infect Dis.* 2004;39:1407-1416.
 Marr KA et al. *Blood.* 2004;103:1527-1533.

Journal of Microbiology 2008

Ullmann AJ et al. *ICAAC* 2005.