



**FIMUA**  
FEDERAZIONE ITALIANA MICOPATOLOGIA UMANA E ANIMALE

**XII CONGRESSO  
NAZIONALE  
FIMUA**

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Epidemiologia della criptococcosi  
in Italia: evoluzione a distanza di  
dieci anni

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Cryptococcosis network

Università degli Studi di Milano



## European Confederation of Medical Mycology (ECMM) prospective survey of cryptococcosis: Report from Italy

FIMUA CRYPTOCOCCOSIS NETWORK\*

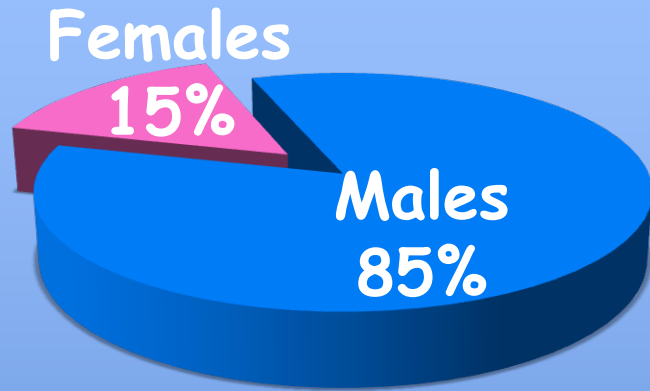
Italy is one of the countries participating in a prospective epidemiological survey of cryptococcosis set up in July 1997 by the European Confederation of Medical Mycology (ECMM). Over a 30-month period 156 cases, all caused by *Cryptococcus neoformans* var. *neoformans*, were reported by 29 hospitals in 9 regions. An ECMM questionnaire was used to report the clinical presentation and the diagnostic and treatment approach used. Cryptococcosis was associated with HIV infection in 147 cases and was considered indicative of AIDS in 65%. The estimated incidence in the Lombardy region was 0.85/100 in the AIDS population. One isolate from each of 129 patients was serotyped and genotyped. PCR fingerprinting using the primer (GACA)<sub>4</sub> proved to be a more reproducible typing method than the slide agglutination test. Genotypes VN1 (serotype D), VN6 (serotype A) and VN3–VN4 (serotype AD hybrid strains) occurred in Italy at similar levels nationwide, but VN1 (D) was prevalent in the North. *In vitro* resistance to antifungals was uncommon.

# New prospective survey 2010-2013

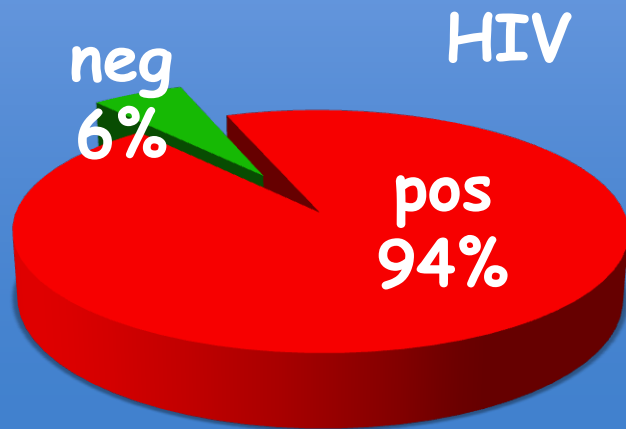
18 hospitals  
58 cases

Region	Town	1997-99 Cases (isolates)	2010-13 Cases (isolates)
Lombardia	Milano	36 (30)	14 (13)
	Brescia	18 (18)	
	Bergamo	7 (5)	4 (4)
	Busto Arsizio	2 (2)	
	Lodi	2 (2)	
	Legnano	3 (3)	
	Pavia	6 (6)	3 (3)
	Varese	3 (3)	1 (1)
	Monza	2 (2)	3 (3)
	Mantova	1 (1)	
	Piacenza	3 (3)	
Lazio	Roma	34 (30)	9 (6)
Veneto	Treviso	7 (1)	
	Verona	2 (2)	2 (2)
Emilia-Romagna	Modena	9 (2)	
Toscana	Arezzo	3 (3)	
	Pisa		4 (4)
Marche	Ancona	3 (3)	6 (6)
Piemonte	Torino	2 (2)	1 (1)
	Novara		2 (2)
Puglia	Bari	8 (6)	
Sardegna	Cagliari	5 (5)	
Trentino	Bolzano		2 (2)
	Merano		1 (1)
Liguria	Genova		3 (1)
Friuli	Udine		3 (3)
<b>Total</b>		<b>156 (129)</b>	<b>58 (52)</b>

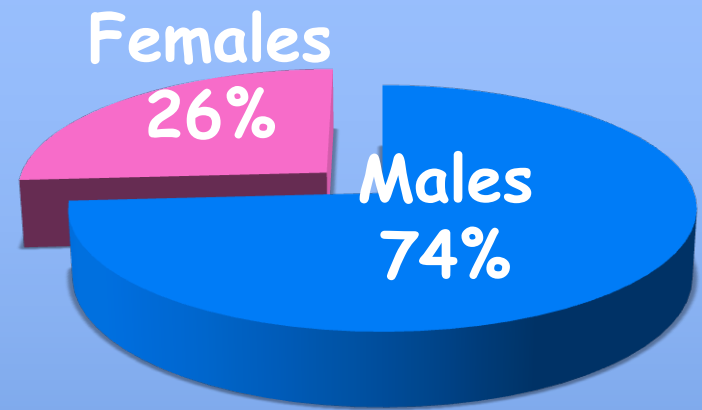
1997-99



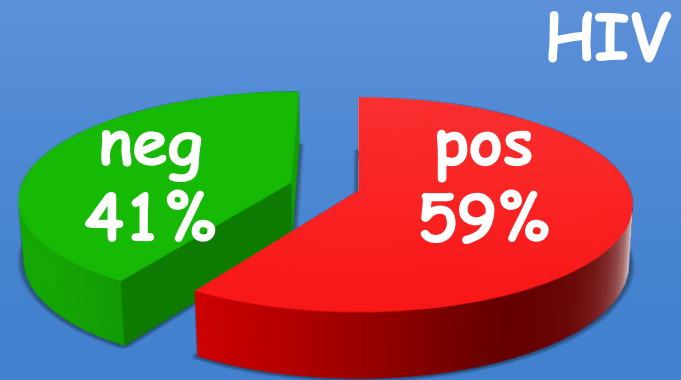
Age range.: 9-83 y



2010-13

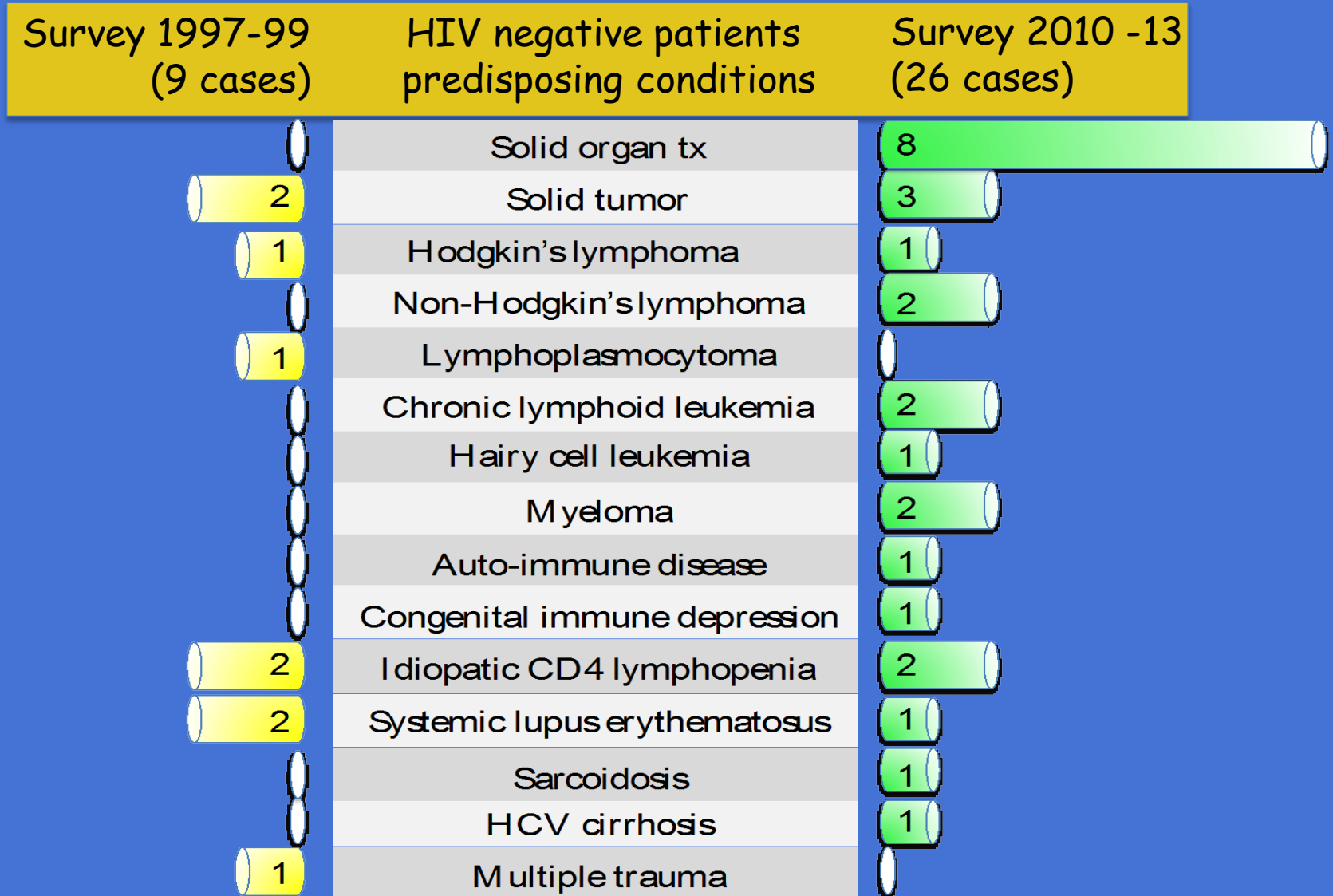


Age range.: 24-81 y





# Predisposing conditions in HIV negative patients





# Prevalence of the molecular types in the two survey

VNI, *C. neoformans* var. *grubii* (ser. A)

VNIV, *C. neoformans* var. *neoformans* (ser. D)

VNIII, hybrid AD

## 1997-99

VNIII 30%

VNI 35%

VNIV 35%

## 2010-13

VNIII 36%

VNI 50%

VNIV 14%

No cases of *C. gattii*



# CONCLUSIONS

Epidemiology of *Cryptococcus* and cryptococcosis is changing



need of constant monitoring



## Cryptococcosis Network 2010-13

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