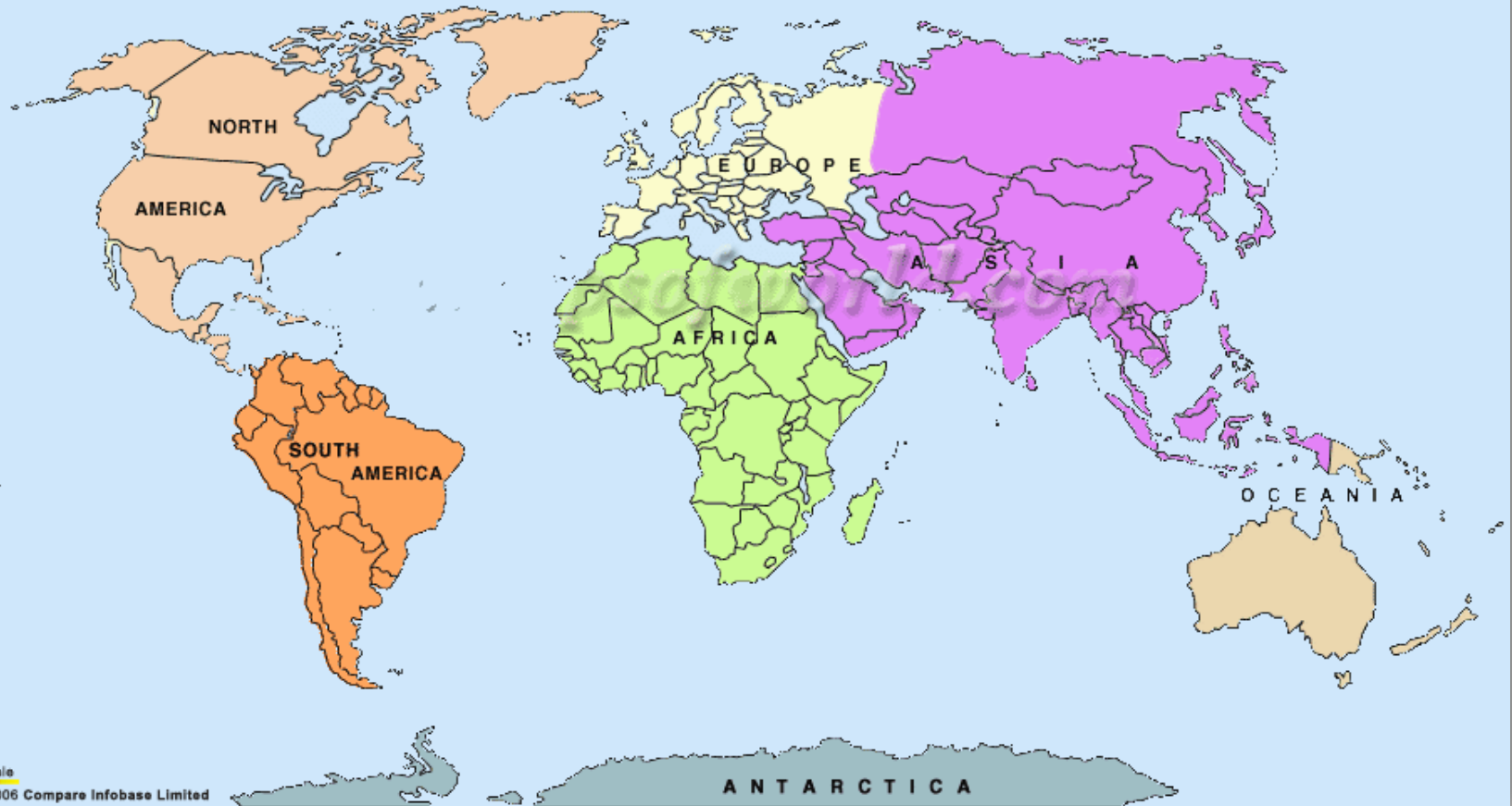


# **IPT in children in Brazil**

Isoniazid preventive therapy

Clemax Couto Sant´Anna, MD, PhD

# Continents of the WORLD



Map not to Scale  
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## TB in Brazil

Setting:

- Endemic area for TB
- BCG- vaccination at birth

# TB cases. Ministry of Health. Brazil

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- ▶ 73 000 new cases notified (2008)
- ▶ Estimated cases (WHO) --92.000 (2008)
- ▶ Brazil: **18<sup>th</sup>/22 countries** with 80% of total TB cases in the world
- ▶ 4.500 deaths per year (> n considering **co-infeccion TB-HIV**)
- ▶ 10% co-infection TB-HIV (**adults**)

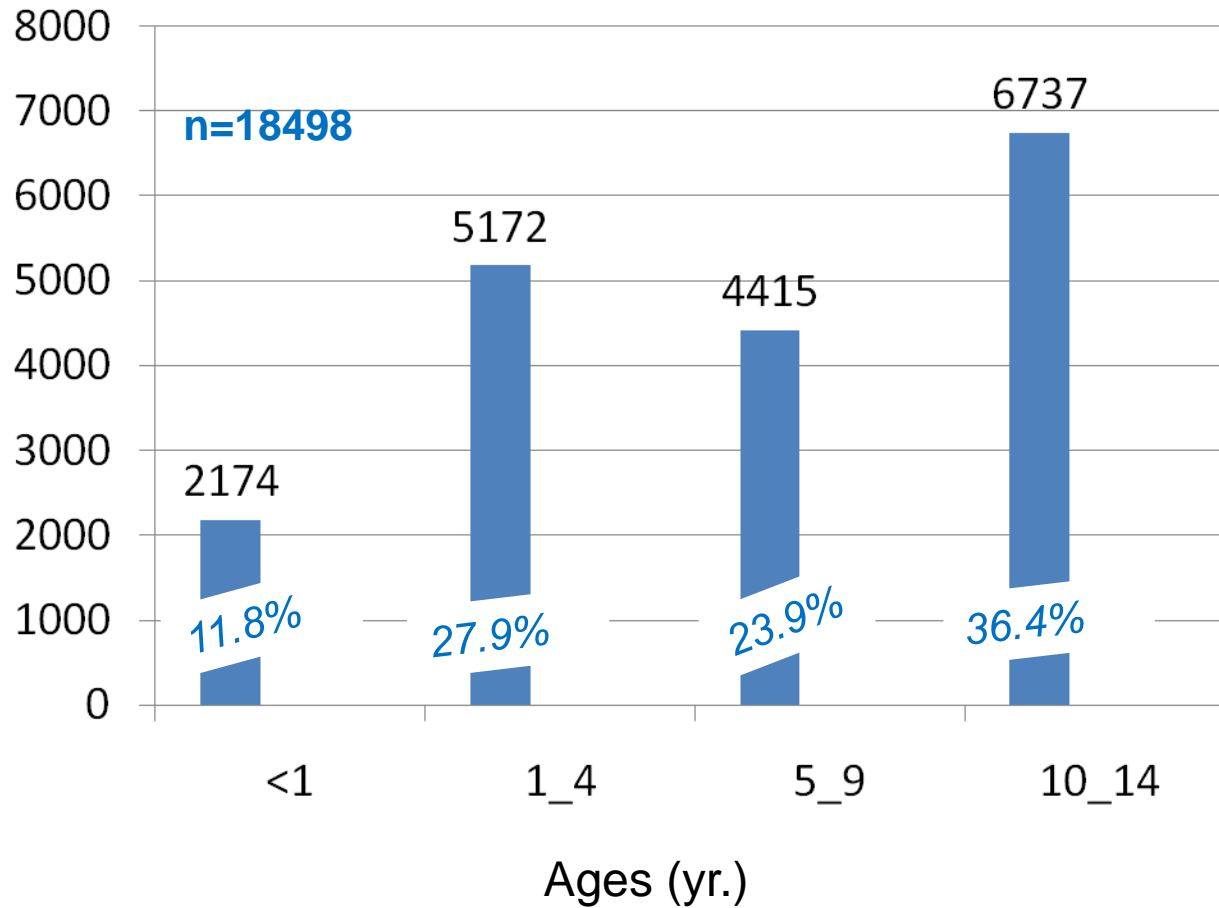
# Risk of TB in vulnerable groups Brazil, 2010

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- ▶ Indigenous: 4 X
- ▶ HIV/Aids : 30 X
- ▶ Arrested : 40 X
- ▶ Homeless: 60 X

# TB cases in children and adolescents

## Brazil, 2000-2006





## **IPT in Brazil**

### Setting

- Endemic area for TB
- BCG- vaccination at birth

# “ **Old** Brazilian Guidelines” - 2002-2010

## TST suggestive of LTBI in children

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- ▶  $\geq 10$  mm in  $> 2$  years BCG-vaccinated children; or non BCG-vaccinated children
- ▶  $\geq 15$  mm in  $< 2$  years BCG-vaccinated children
- ▶  $\geq 5$  mm in immunosuppressed patients
  
- ▶ TST “Brazilian old classification” : *non reactor (0-5) ; weak reactor (5-9 mm); strong reactor ( $\geq 10$ mm)*  
*OBS: BCG vaccination at birth*



# “ **Old** Brazilian Guidelines” - 2002-2010

## IPT in contacts

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- ▶ IPT with INH for 6 months
- ▶ Indicated in asymptomatic individuals with normal CXR
- ▶ Priority: children under 5
- ▶ Indicated:  $\leq 15$  yr.

# IPT in children and adolescents contacts

Rio de Janeiro. Brazil. 2008-2010

		Ages (years)		
		0-9 (N=1497)	10-19 (N=857)	P
<b>BCG-vaccination</b>	<b>Yes</b>	1392	810	0,009
	<b>No</b>	38	9	
<b>Chest X Ray</b>	<b>Normal</b>	1363	799	0,7
	<b>Sequelae</b>	13	5	
	<b>Other</b>	20	12	
<b>TST</b>	<b>≤ 5 mm</b>	75	10	0,000
	<b>5-9 mm</b>	43	23	
	<b>10-14 mm</b>	518	325	
	<b>≥15 mm</b>	736	481	
	<b>Source of TB infection (AFB +)</b>			
	<b>Yes</b>	1402	818	0,04
	<b>No</b>	95	39	
<b>HIV</b>	<b>Positive</b>	42	17	0,5
	<b>Negative</b>	37	14	

# IPT in children and adolescents contacts

Rio de Janeiro. Brazil. 2008-2010

## Contacts exposed to TB baciliferous patients with normal CXR

	Ages		
	0-9 yr. (N=1300)	10-19 yr. (N=768)	p
<b>BCG-vaccination</b>			
<b>Yes</b>	1248	740	
<b>No</b>	22	6	0,06
<b>TST</b>			
<5mm	62	10	
<b>5-9 mm</b>	<b>37</b>	<b>12</b>	
10-14mm	468	290	
≥15mm	678	443	0,000
<b>HIV serology</b>			
<b>Pos</b>	22	7	
<b>Neg</b>	27	7	0,4



# IPT indications

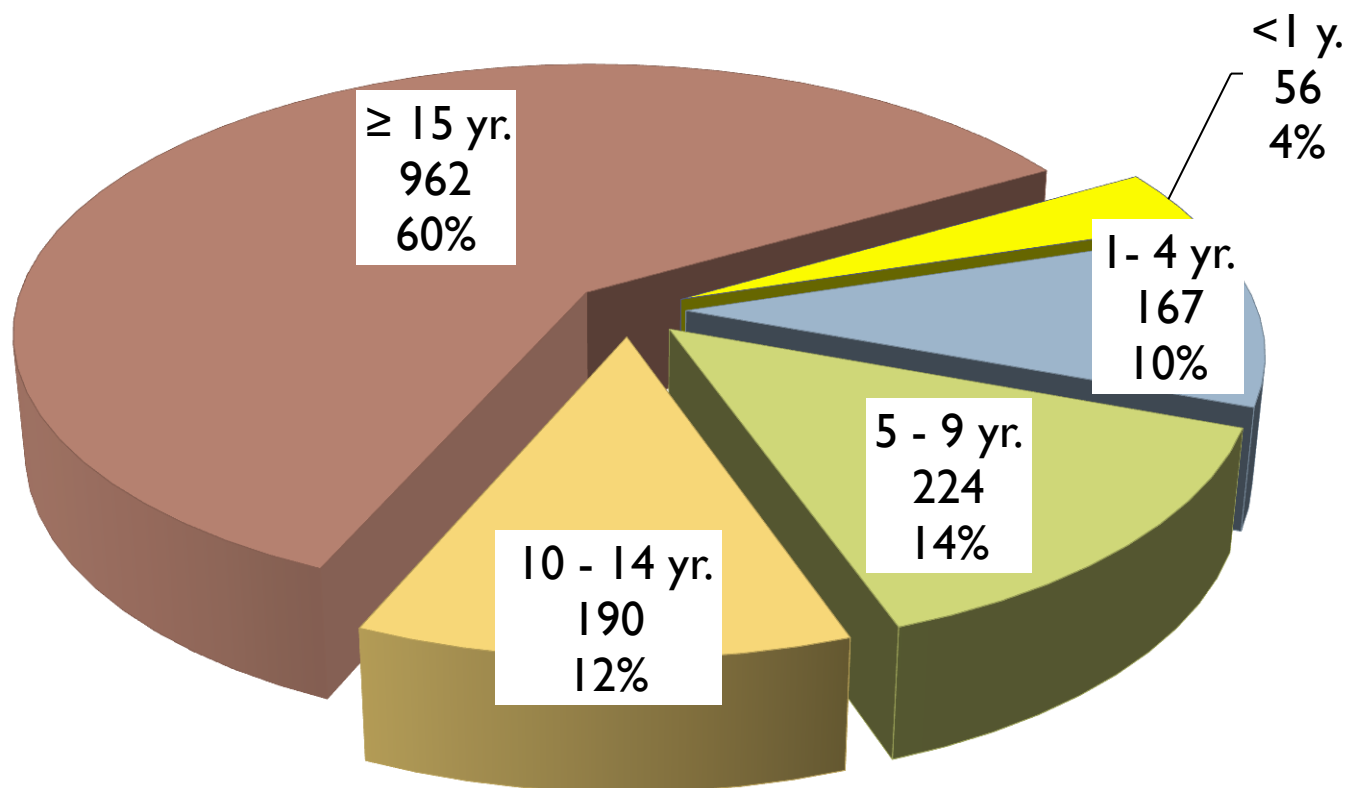
Santa Catarina. Brazil, 2003-2010

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		n	%
<b>Contact &lt; 15 yr.</b>	<b>Non BCG vaccinated; TST <math>\geq</math> 10mm</b>	5	1.5
	<b>BCG vaccinated; TST <math>\geq</math> 15mm</b>	272	84.2
<b>Tuberculin conversion</b>		8	2.5
<b>Immunosuppressed patients</b>		4	1.2
<b>HIV</b>		16	5.0
<b>Other</b>		18	5.6
Total		323	100.0

# IPT by ages

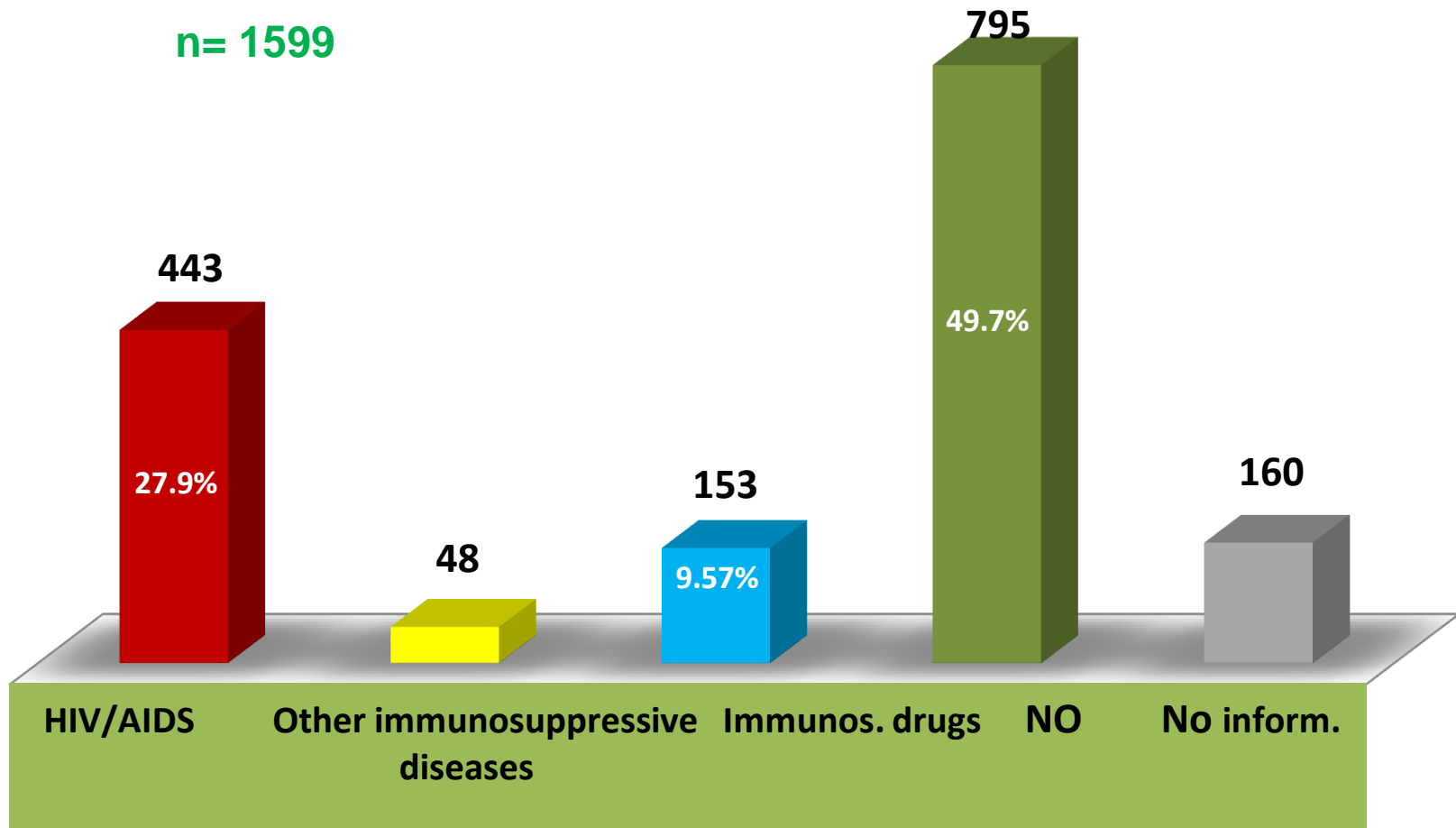
São Paulo. Brazil, 2009



# IPT by immunosuppressive conditions

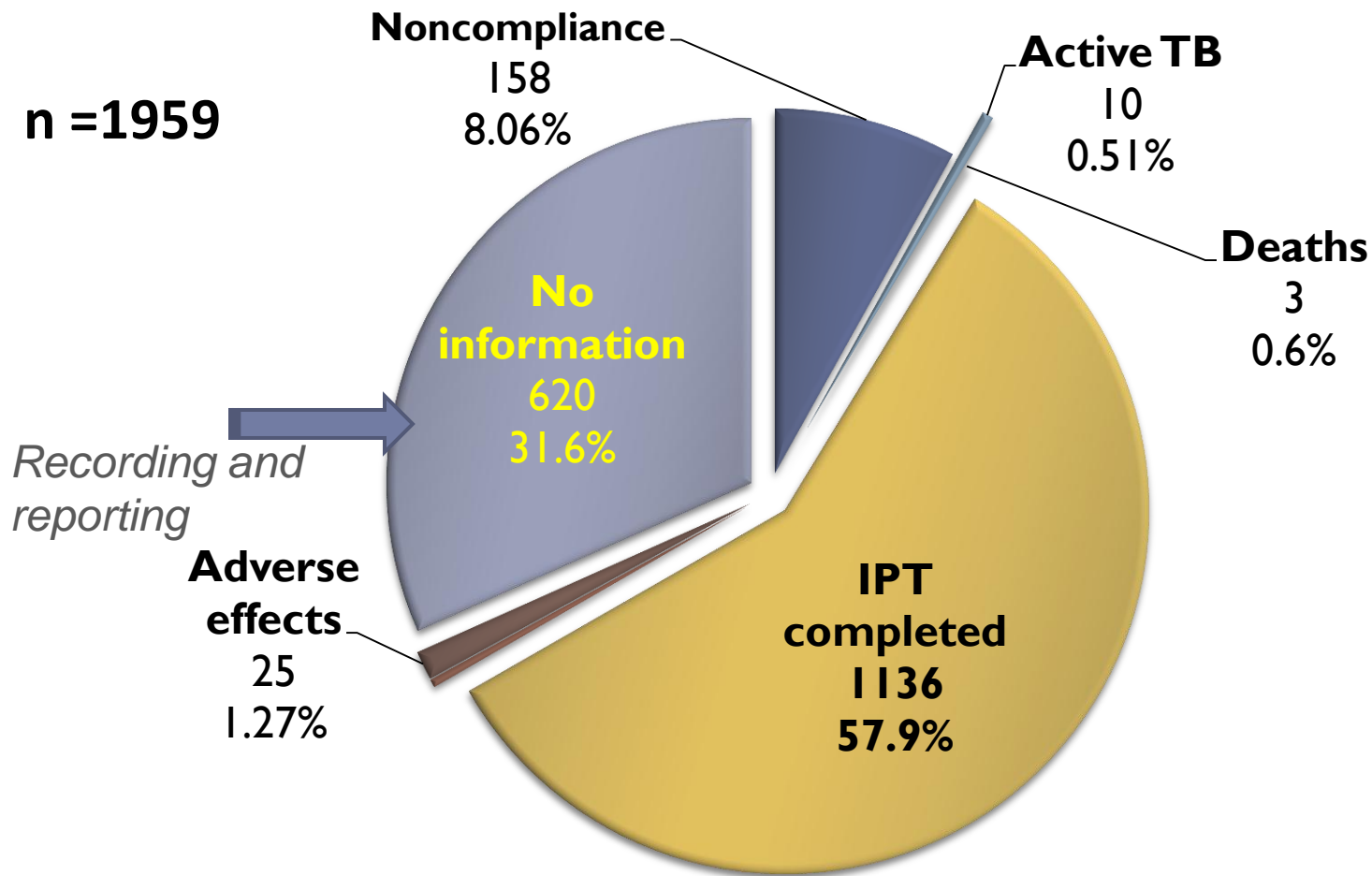
São Paulo, Brazil, 2009

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# IPT: follow up

São Paulo. Brazil. 2010





# Quimioprofilaxia TB

**CVE** Centro de Vigilância Epidemiológica  
Prof. "Alexandre Vranjac"

**Autenticação no Sistema**

**- Entre com seu Usuário e Senha.**

Usuário:  Senha:





Paciente: TESTE RAPHAEL 3 - Nascimento: 15/12/2000 - Sexo: M

Identificação Endereço Notificação Evolução

CEP:

Município:

GVE:

Tipo de logradouro:

Logradouro:

Número:

Bairro:

Distrito:

Área Resid.:

Telefone:

Institucionalizado: [ Seleccione ]



Paciente: TESTE RAPHAEL 3 - Nascimento: 15/12/2000 - Sexo: M

Identificação Endereço Notificação Evolução

Nº Notificação: 74619

Nome: TESTE RAPHAEL 3

Data de Nascimento: 15/12/2000 v

Sexo: Masculino v

Indígena: Não v

Nome da Mãe: AA BB

Tipo Ocupação: [Selecione] v

Voltar

Gravar

Paciente: [REDACTED]

Identificação

Endereço

Notificação

Evolução

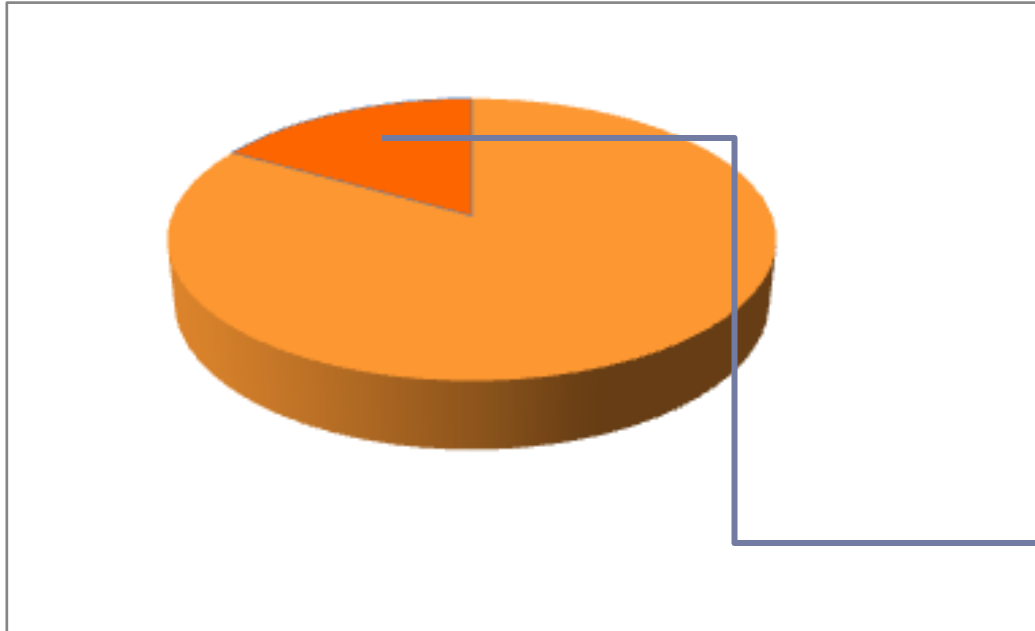
Data de início da medicação: 3/8/2011

Data de encerramento: 05/12/2012

Situação 1º Mês:	7 - Em tratamento	(de 3/8/2011 a 3/9/2011)
Situação 2º Mês:	7 - Em tratamento	(de 3/9/2011 a 3/10/2011)
Situação 3º Mês:	7 - Em tratamento	(de 3/10/2011 a 3/11/2011)
Situação 4º Mês:	7 - Em tratamento	(de 3/11/2011 a 3/12/2011)
Situação 5º Mês:	7 - Em tratamento	(de 3/12/2011 a 3/1/2012)
Situação 6º Mês:	7 - Em tratamento	(de 3/1/2012 a 3/2/2012)
Situação 7º Mês:	1 - Quimioprofilaxia completada	(de 3/2/2012 a 3/3/2012)
Situação 8º Mês:	[Selecione]	(de 3/3/2012 a 3/4/2012)
Situação 9º Mês:	[Selecione]	(de 3/4/2012 a 3/5/2012)
Situação 10º Mês:	[Selecione]	(de 3/5/2012 a 3/6/2012)
Situação 11º Mês:	[Selecione]	(de 3/6/2012 a 3/7/2012)
Situação 12º Mês:	[Selecione]	(de 3/7/2012 a 3/8/2012)

# Contact screening in children

Health center in Rio de Janeiro. Brazil. 2006-2010



- **n=228 LTBI individuals [ages ranged: 1 mo. to 16 years (mean = 6,2 yr.)]**
- **38 (17%) IPT noncompliance**



## Brazilian TB Guidelines, 2010 (Update)

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### TST suggestive of LTBI in children

- ▶  $\geq 5$  mm in  $> 2$  years BCG-vaccinated children; or non BCG-vaccinated children or immunosuppressed patients
- ▶  $\geq 10$  mm in  $< 2$  years BCG-vaccinated children

# Brazilian TB Guidelines, 2010 (Update)

## Priorities in contact tracing and IPT

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- < 5 years of age children and HIV-Aids patients
- HIV infected TB contacts must start IPT independent TST result

# Brazilian TB Guidelines 2010(Update)

## IPT in HIV infected patients

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CXR normal and:

- TST  $\geq 5$  mm
- Intradomiciliar or institutional contacts exposed to TB positive patients **despite TST result**
- TST  $< 5$  mm **if previous TST  $\geq 5$  mm** without previous active TB or IPT

OR:

- **TB sequelae in CXR** without previous TB treatment despite TST result (**rule out** active TB)

# Brazilian TB Guidelines 2010(Update)

## IPT by high risk groups

MoH. Brazil, 2010

TST $\geq$ 5 mm	TST $\geq$ 10 mm	Tuberculin conversion
<b>BCG non-vaccinated children</b> <b>&gt;2 yr. BCG – vaccinated children</b> Adult contacts	<b>&lt; 2 yr. BCG-vaccinated contact children</b>	TB baciliferous contacts
HIV/Aids	Silicosis	
Under treatment with TNF $\alpha$ inhibitors		Health professionals
Sequelae in CXR	Head and neck cancer, Diabetes	
Grafted patients (immunossuppressed)		



# IPT in Brazil

## Résumé

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- ▶ Importance of TST for diagnosis of LTBI
- ▶ Adherence : 8 – 17 % ?
- ▶ Recording and reporting system
- ▶ Low HIV infection area/ low indication in HIV patients?

### Perspectives

- ▶ Guidelines updated
- ▶ On line information system

## Acknowledgments

Dr. Dráurio Barreira and Mrs. Patricia Bartholomay (MoH, Brazil); Dr. Ana Alice Pereira (SES-RJ); Dr. Marilene A. Rocha Santos, Dr. Maria de Fátima Pombo March and Dr. Luiza Calvano (UFRJ)