



# 2008 French epidemiological survey on Infectious Endocarditis : methodology, application and preliminary results

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Endocarditis



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# Study objectives

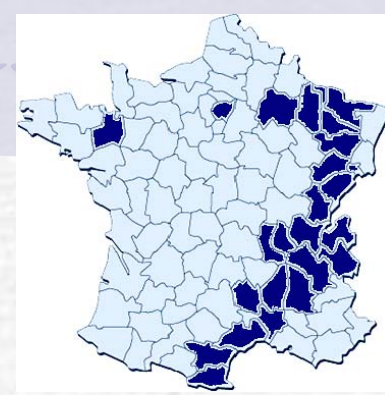
## Primary objective

- Update the description of epidemiologic, clinical, microbiologic and evolutive characteristics of IE in France

## Secondary objectives :

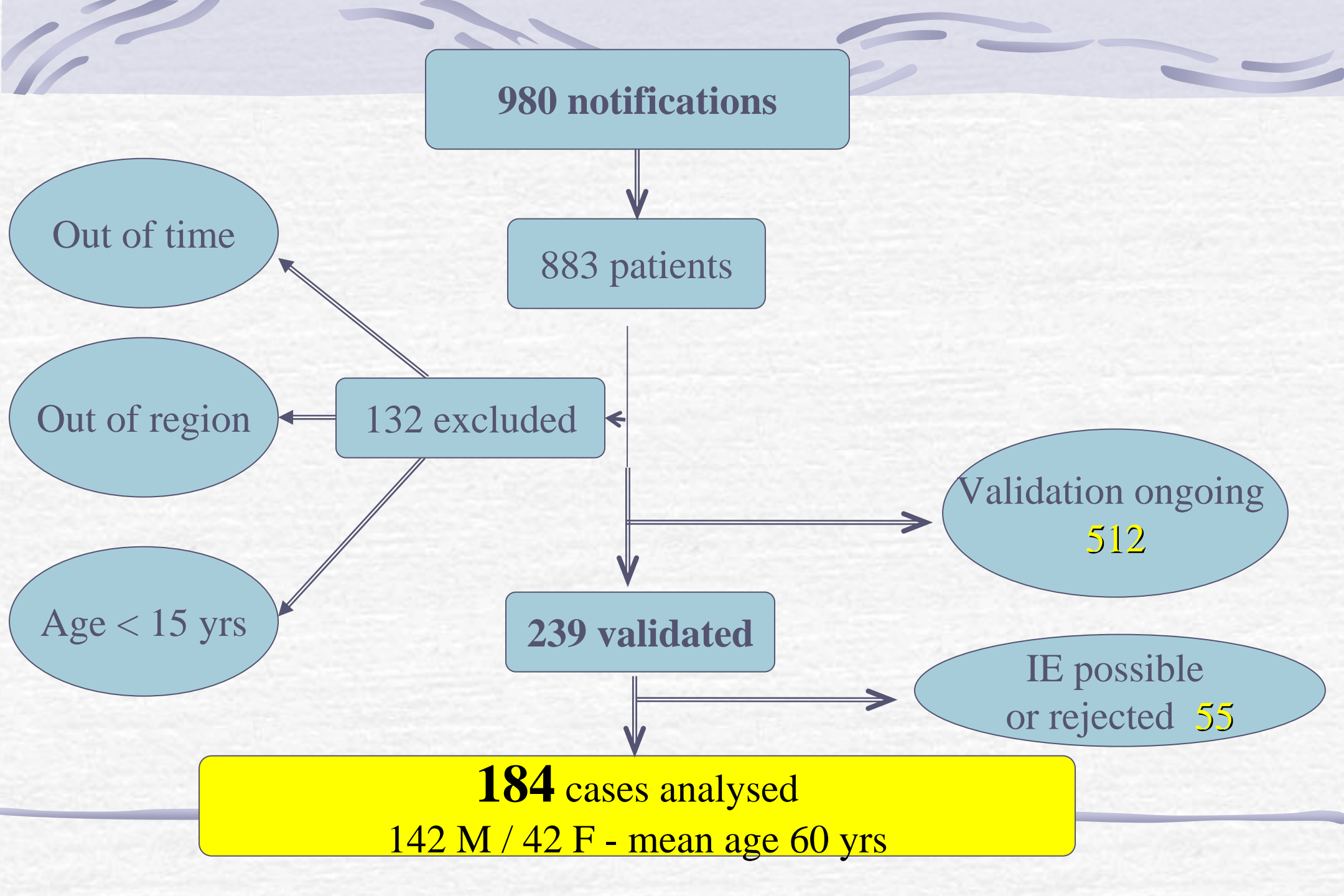
- Compare current data with those obtained from a similar survey performed 9 and 17 years earlier
- Impact of 2002 IE prophylaxis guideline modifications
- Describe oral streptococci and *S. aureus* susceptibility
- Assess surgery impact on in-hospital and 5-year survival

# Methods



- Population-based prospective study conducted from Dec 1, 2008 to Mar 31, 2009 in 7 French regions
- Total population: 16 million inhabitants (26 % of the French population). Only pts whose first hospitalization date fell between Jan 1 and Dec 31, 2008 will be retained for the analysis.
- Study publicized & recalled by mail to all hospital physicians falling into one of the following categories:
  - physicians likely to take care of patients with IE
  - echocardiographers
  - microbiologists
- Only Duke-Li definite cases of IE were kept in the study





980 notifications

883 patients

Out of time

Out of region

132 excluded

Age < 15 yrs

239 validated

Validation ongoing

512

IE possible  
or rejected

55

**184** cases analysed

142 M / 42 F - mean age 60 yrs

# Underlying heart disease

	N (%)
Native valve disease	35 (19%)
PM	20 (11%)
Prosthetic valve	41 (22%)
Congenital heart disease	6 (3%)
Previous IE	12 (6.5%)
Unspecified "cardiac murmur"	6 (3%)
No previously known underlying heart disease	96 (52%)

# Location of IE

Localisation	n (%)
Aortic valve	35 (19%)
Mitral valve	52 (28%)
Aortic and mitral valves	53 (29%)
Tricuspid valve	15 (8%)
Pulmonic valve	1 (0.5%)
Bilateral IE	17 (9.2%)
Pacemaker	7 (3.8%)
Undetermined	4 (2%)

# Distribution of microorganisms

<i>Streptococcaceae</i>	91	46%
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Oral streptococci	41	22%
Group D streptococci	25	14%
Pyogenic streptococci	10	5%
Enterococci	12	7%
Other <i>Streptococcaceae</i>	3	2%

<i>Staphylococcaceae</i>	67	36%
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<i>Staphylococcus aureus</i>	48	26%
Coagulase-negative staphylococci	18	10%

Other microorganisms	14	8%
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≥ 2 microorganisms	6	3%
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No microorganism identified	6	3%
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# Outcome

	n	%
Surgery	82	48%
In hospital death	49	27%
Hospital stay (days)	61	SD:53



# From 1991 to 2008: some trends

		1991	1999	2008
Incidence (per million)		24	30	?
No known valvular disease	↗	33%	47%	52%
Identified microorganism	↗	92%	95%	97%
<i>Streptococcus bovis</i>	↕	13 %	25%	14%
Staphylococci	↗	23%	29%	36%
Surgical Rx	↗	30%	49%	48%
Lethality (hospital stay)	↘	21%	17%	27%

# Conclusions

## Trends

- IE predominates in patients with NO known valvular disease
- One third of pts with endovascular devices IE
- Probable increase in staphylococcal IE
- Improvement in microbiological diagnosis

## Outcome

- Valve surgery during initial hospitalization in one out two pts
- In-hospital lethality increase ??

Clinical and microbiologic profile of IE is changing continuously and rapidly. This emphasizes the need for a close epidemiological surveillance of this disease.



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