

# Clinical and microbiological characteristics of patients hospitalized for suspected Middle-East Respiratory Syndrome Coronavirus infection during the 2013-2016 period in the Paris area

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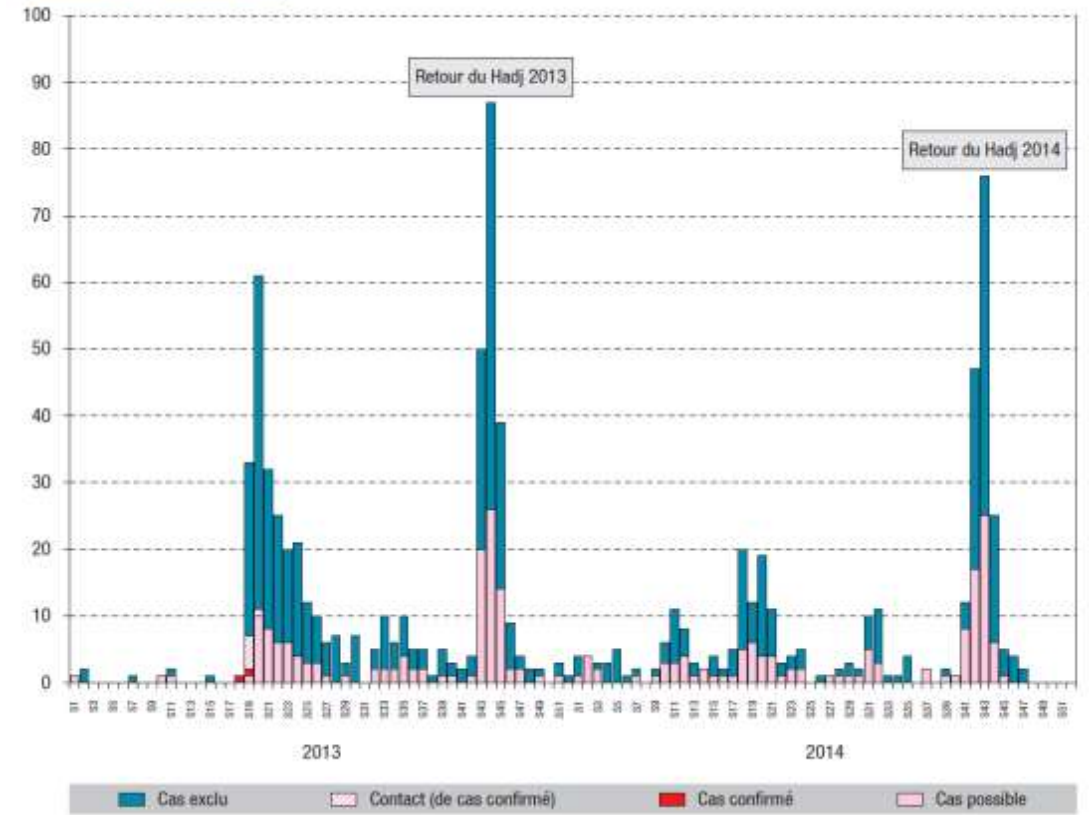
# Disclosures

- ▶ Related to this work = NONE
- ▶ Congress and travels
  - Janssen-Cilag
  - Gilead

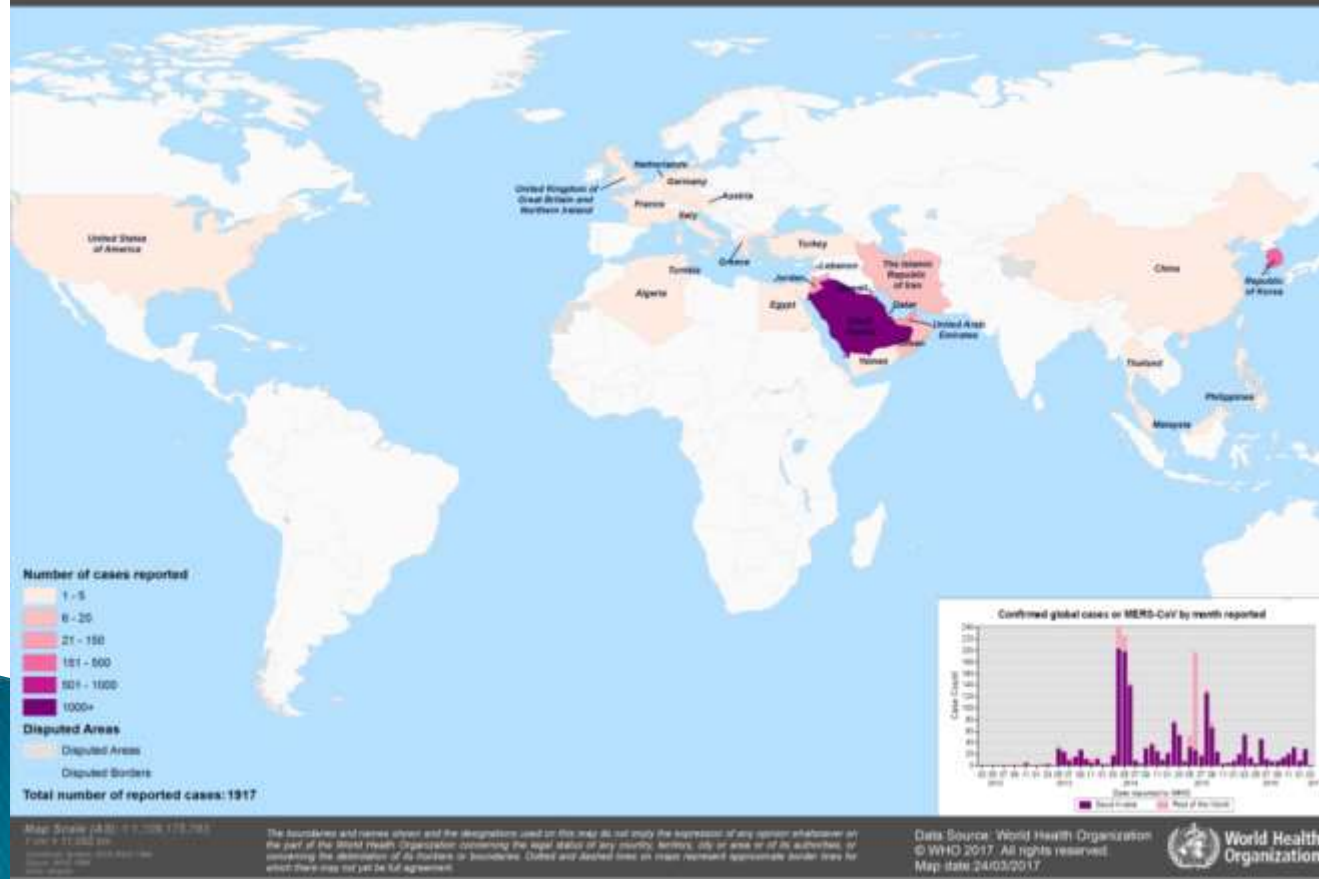
# Introduction

- ▶ World wide :
  - 1917 confirmed cases
  - 684 deaths

Nombre de signalements par semaine pour suspicion d'infection à MERS-CoV en France depuis janvier 2013 (n=850) (données au 17 novembre 2014)



CONFIRMED GLOBAL CASES OF MERS-COV 2012 - 2017



- ▶ France:
  - 1568 suspected patients
  - 478 probable cases
  - 2 MERS-CoV cases
  - 1 death

A. Sanna BEH 2015

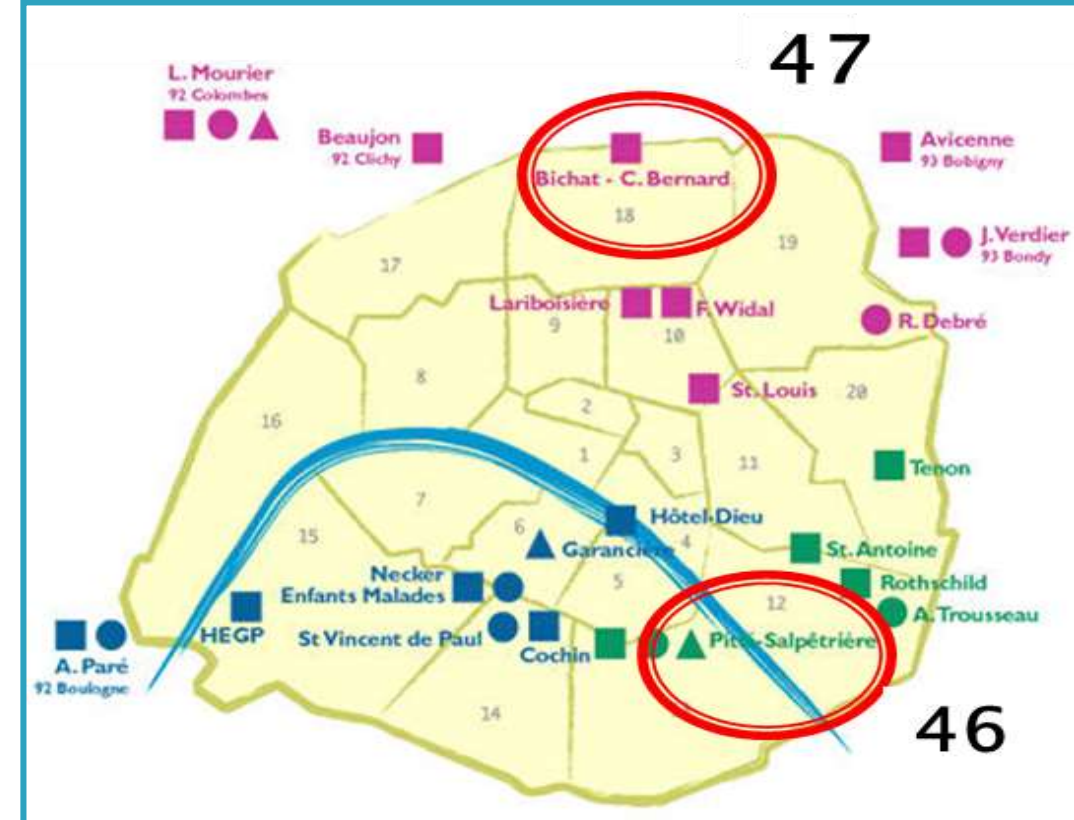
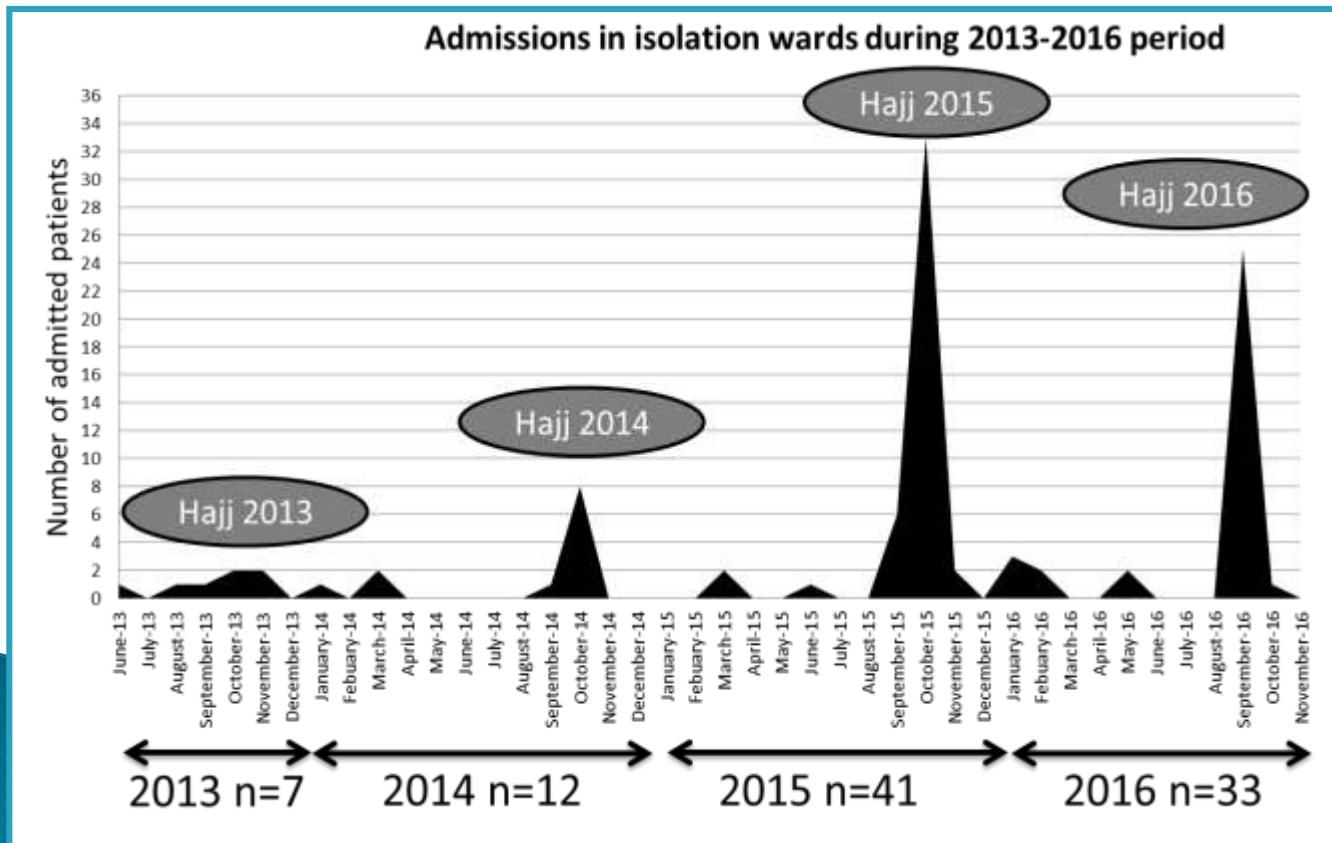
# Objectives

- ▶ To describe clinical and microbiological characteristics of patients hospitalized for suspected MERS-CoV infection during the 2013–2016 period in the Paris area



# Study population

- ▶ 93 hospitalized patients
- ▶ 2 MERS-CoV referral ID unit in Paris
- ▶ Study period: 2013–16



- Age=63,4 (56–71)
- 80.6% with comorbidities
- 2 (1–3) comorbidities / pt
  - Hypertension (61.3%)
  - Respiratory diseases (23.6%)
  - Cardiac diseases (22.6%)
  - Obesity (20.4%)

# Travel

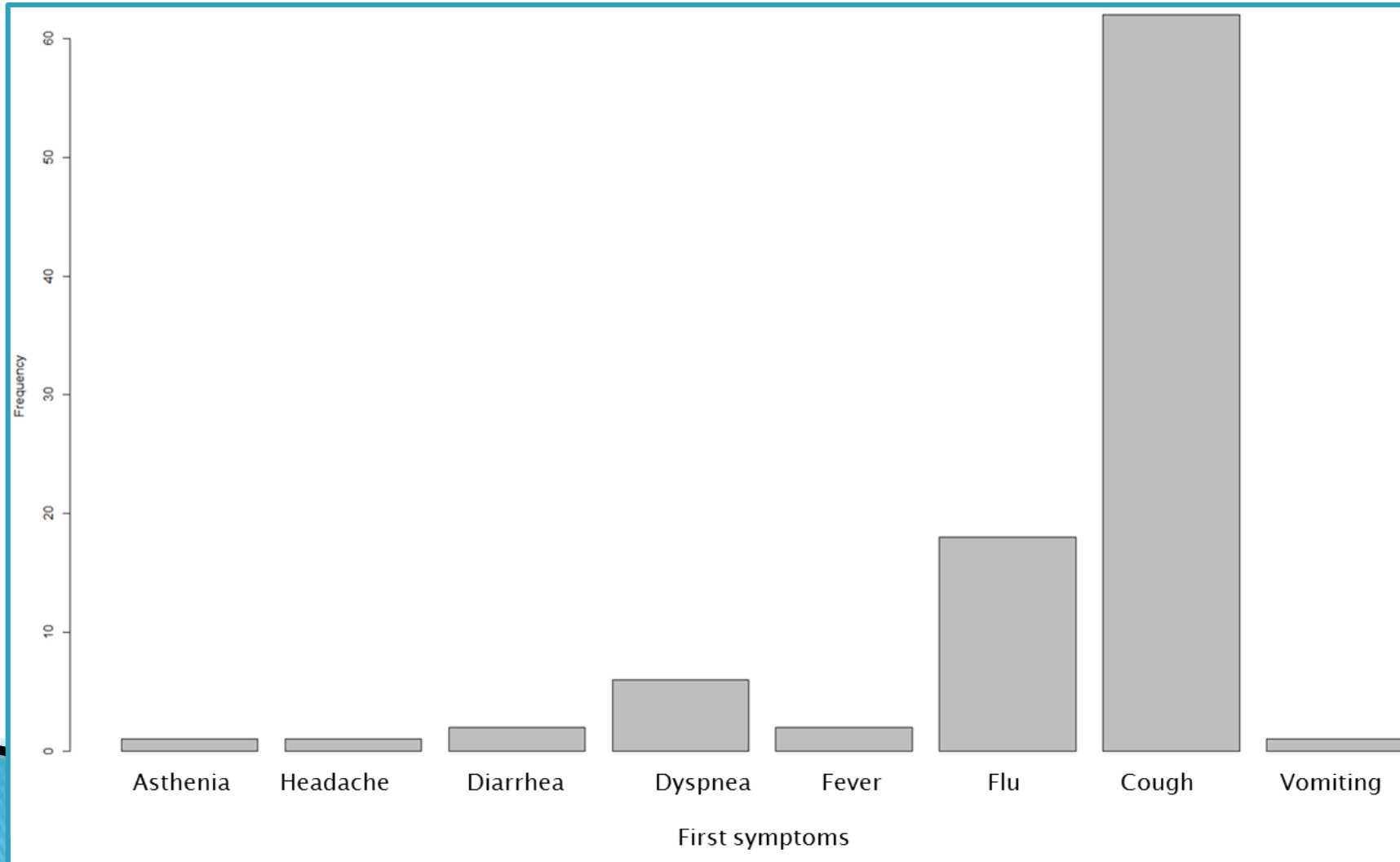


Reason for travel	N	%
Pilgrimage	74	79,6
Business	4	4,3
Tourism	11	11,8
Resident	4	4,3
Duration of travel (days) Median (IQR)	23 (17–27)	
Time of illness (days)	6,5 (4–12)	

- Travel duration 23d (17–27)
- Arrival–hospitalization delay 2d (1–5)
- 43 (46.74%) close contact with respiratory ill cases
- 5 (5.4%) exposition to dromedary
- 34 (36%) consultation during the trip
- 9 (10%) hospitalized during the trip

# First symptoms

- ▶ 6.5 days before hospitalizations
- ▶ All the patients reported fever



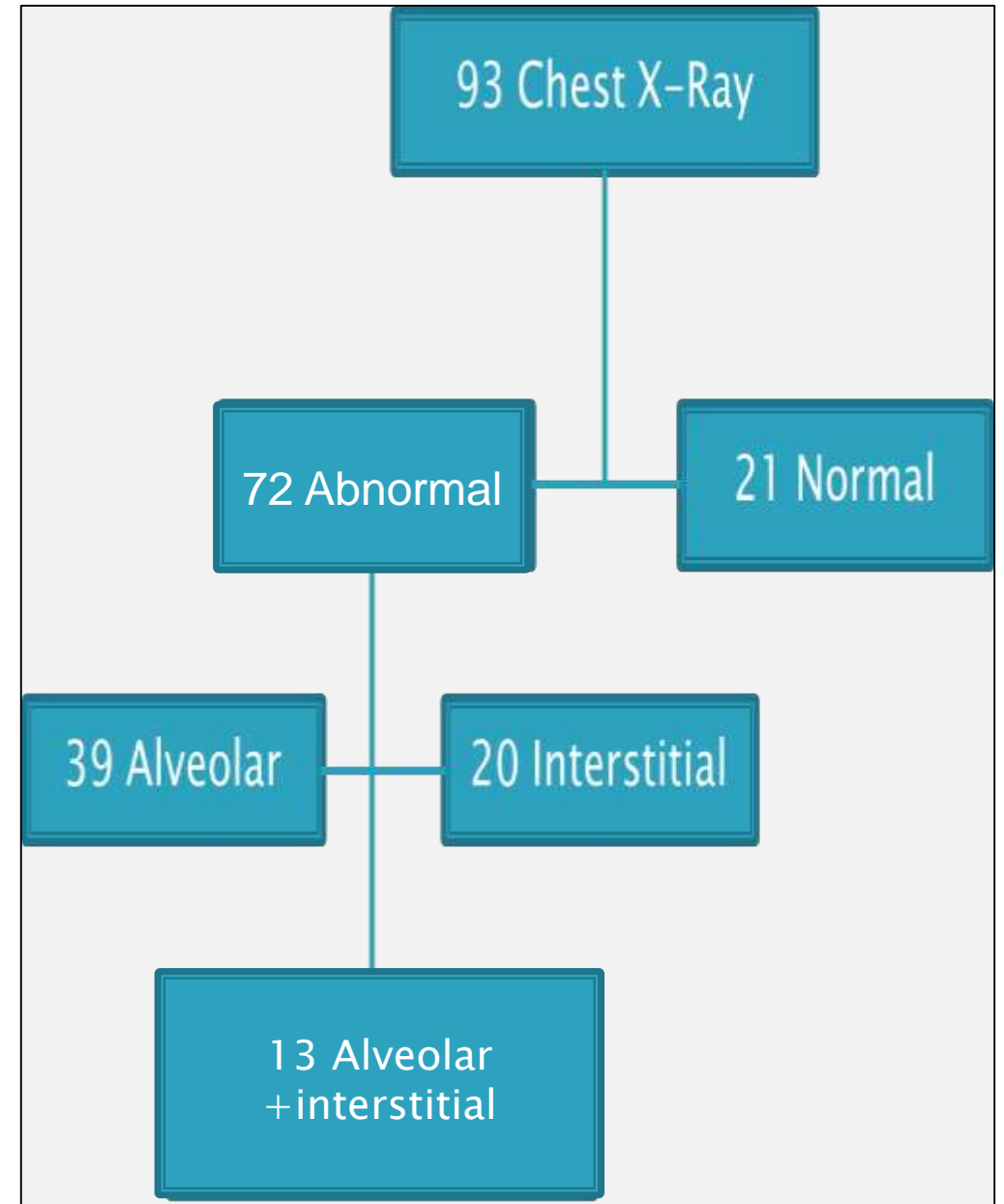
# Initial evaluation

## Characteristics

Sex ratio M/F	49/44
Temperature	38.4 (37.2-39)

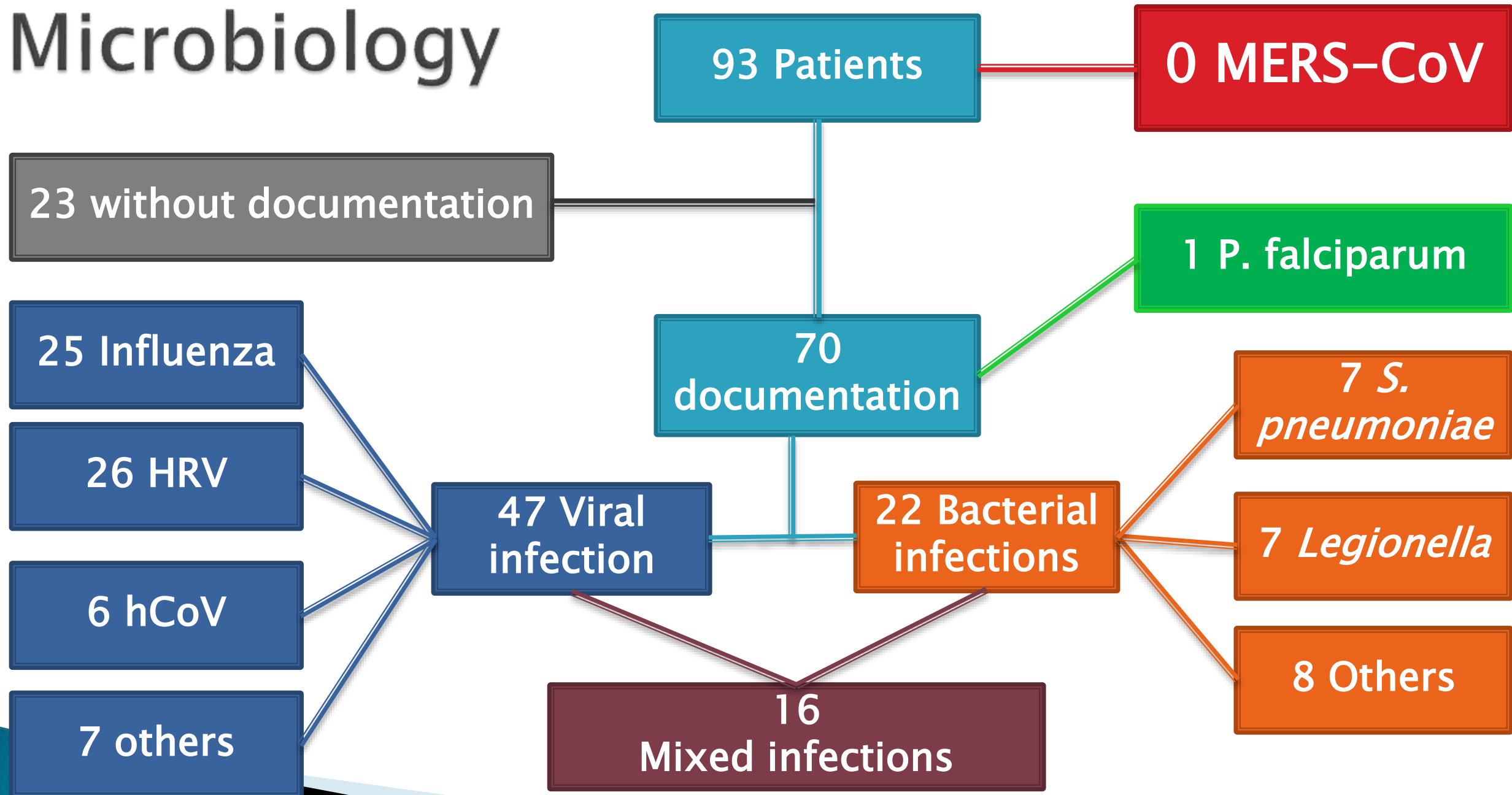
Symptoms	n	%
Cough	89	95.7
Fever (>38°C)	61	65.6
Lung crackles	61	65.6

Laboratory tests (n)	median	IQR
CRP (81)	122	41-247
WBC (90)	9295	6450-12325





# Microbiology



HRV: Rhinovirus  
hCoV: human coronaviruses

# Antibiotic therapy

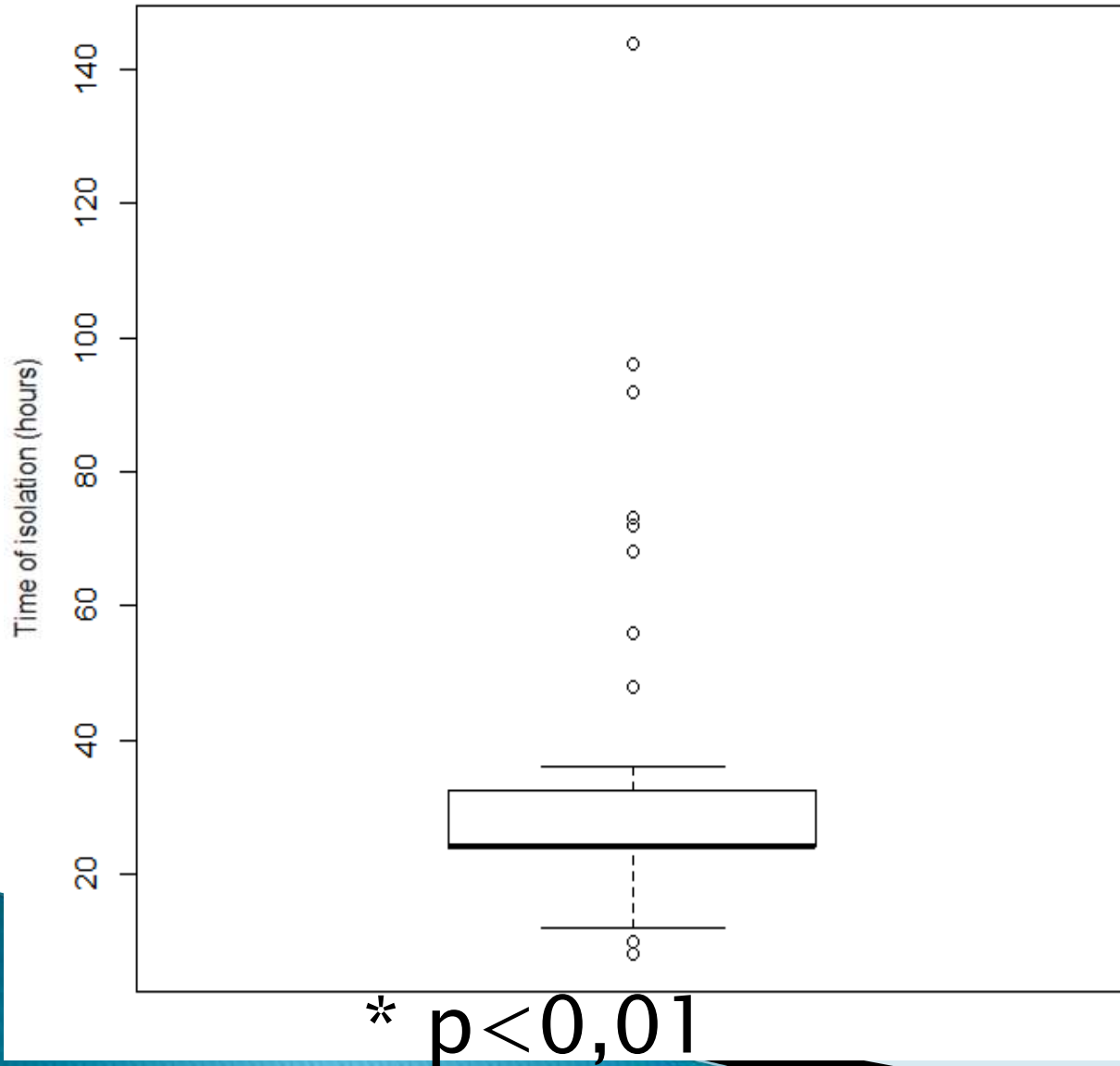
Total duration = 168h (168–242)

- ▶ 81 (87.1%) empiric antibiotic therapy
  - 80 % antibiotic associations (AA)
    - 3GC–Macrolid 87%
  - 20% monotherapy
    - $\beta$ -lactamin 100%
- ▶ AA duration = 48h (24–116)
  - 76.2% adapted at 48h
    - 81% monotherapy switch
    - 19% AA maintained
  - 23.8% discontinued

# Neuraminidase inhibitors

- ▶ 35 patients (37.6%)
- ▶ Oseltamivir 75 \*2 /24h
- ▶ Duration = 120 h (24-120)
  - 34.3% discontinued after 48h
  - 54.3% maintained 5d
- ▶ 16 /25 (64%) documented Flu treated

# Isolation duration



# Outcome

- ▶ 10 patients in ICU
- ▶ 2 (2,1%) patients died
  - 1 Malignant flu
  - 1 *S. aureus* IEI



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Letter to the Editor

Delayed management of *Staphylococcus aureus* infective endocarditis in a Middle East respiratory syndrome coronavirus possible case hospitalized in 2015 in Paris, France

- ▶ From alert to hospital discharge :
  - 4 days (3–8)

# Take Home Message

- ▶ 93 patients 0 MERS-CoV
- ▶ 75% had documented infection
  - Seasonal viruses : Influenza & HRV
  - Legionellosis 10%, Pneumococcus 10%
  - Mixed infection (V-V, V-B) ~20%

## Management of MERS-CoV suspicion

- Trained team in EID
- Empiric treatment
  - 3GC + macrolid/FQ + neuraminidase inhibitors
- Rapid access to virological results

