

# Zoonoses et arboviroses

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## Déclaration de liens d'intérêt avec les industries de santé en rapport avec le thème de la présentation (loi du 04/03/2002) :

**Intervenant :** Eldin/Carole

**Titre :** Zoonoses et Arboviroses

- Consultant ou membre d'un conseil scientifique
- Conférencier ou auteur/rédacteur rémunéré d'articles ou documents
- Prise en charge de frais de voyage, d'hébergement ou d'inscription à des congrès ou autres manifestations
- Investigateur principal d'une recherche ou d'une étude clinique

OUI  NON

OUI  NON

OUI  NON

OUI  NON

# Encéphalite à tiques

# Tick-Borne Encephalitis (TBE)

- Augmentation globale des cas en Europe en 2020 (entre 18 et 88%!)
- Deuxième cas autochtone décrit au Royaume-Uni en 2022 après piqûre de tiques
- Détecté dans des tiques et séroprévalence biches 9%

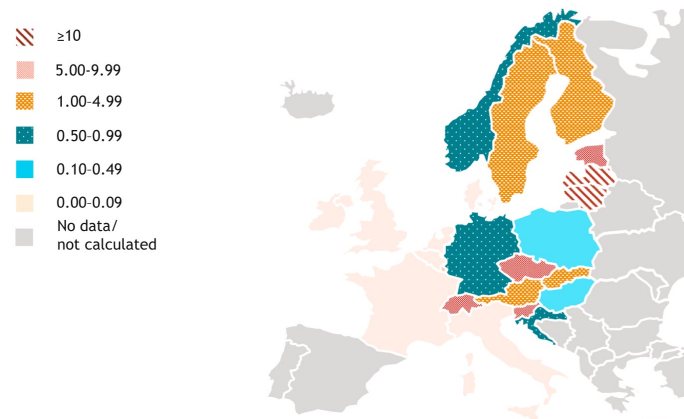
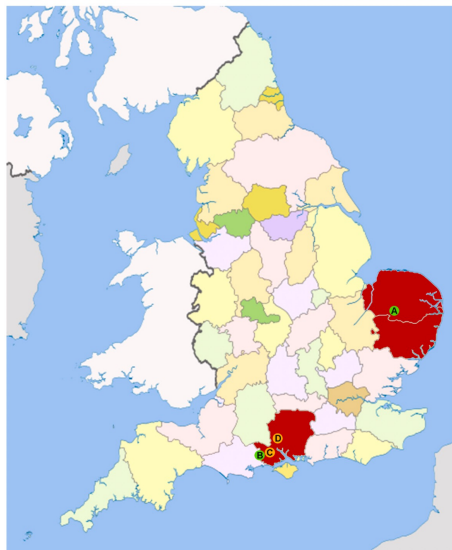


Fig. 1. TBE incidence per 100,000 inhabitants in 2020.

Jenkins et al. The epidemiology of infectious diseases in Europe in 2020 versus 2017–2019 and the rise of tick-borne encephalitis (1995–2020). Ticks and tick-borne Dis. Oct 2021

Mansbridge et al. Autochthonous tick-borne encephalitis in the United Kingdom: A second probable human case and local eco-epidemiological findings. Ticks and Tick borne dis. 2022

# TBE France : cluster alimentaire dans l'Ain

- Mai 2020: 44 cas, dont 42 de méningites lymphocytaires tous liés à la consommation de fromage de chèvre au lait cru

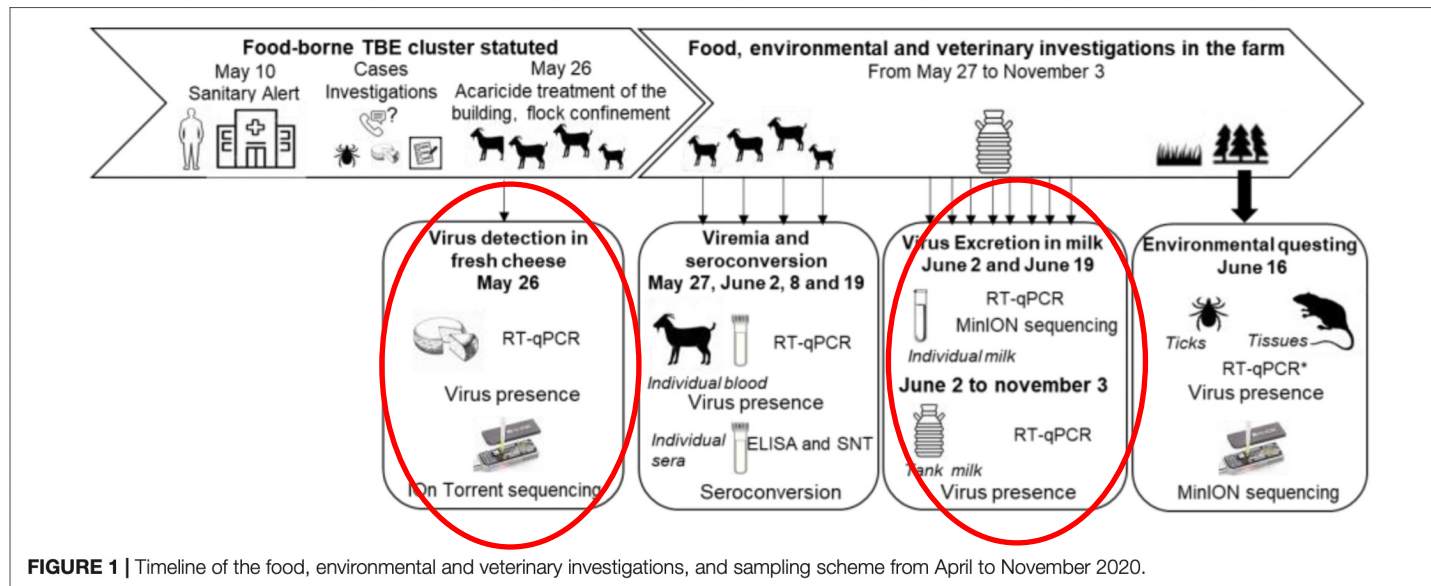


FIGURE 1 | Timeline of the food, environmental and veterinary investigations, and sampling scheme from April to November 2020.

Gonzalez et al. A One-Health Approach to Investigating an Outbreak of Alimentary Tick-Borne Encephalitis in a Non-endemic Area in France (Ain, Eastern France): A Longitudinal Serological Study in Livestock, Detection in Ticks, and the First Tick-Borne Encephalitis Virus Isolation and Molecular Characterisation. Front Microbiol 2022, April 23<sup>rd</sup>, 13:808812. doi:10.3389/fmicb.2022.808812

# TBE: 1 mot de clinique

## Etude rétrospective multicentrique Européenne (6 pays entre 2010 et 2017): 553 patients

- 49% de méningo-encéphalites
- 37,3% de méningites simples
  
- 2,9% de vaccinés (mais schémas incomplets)
- Méningites: patients plus jeunes et meilleur pronostic

Table 1. Cont.

Basic Characteristics	All Patients (n = 555)
multiple cranial palsies (%)	6 (1.1)
disturbance of sensibility (%)	20 (5) *
bladder dysfunction (%)	20 (5) *
pain in extremities (%)	17 (4) *
respiratory paresis (%)	9 (2) *
rectal dysfunction (%)	9 (2) *
<b>outcome at hospital discharge</b>	
complete recovery (%)	117 (39) *
incomplete recovery (%)	176 (59) *
death (%)	5 (2)

\* Number of available observations: all patients:  $n = 555$ , except BMI ( $n = 315$ ), TBE vaccination status ( $n = 546$ ), tick bite noticed ( $n = 444$ ), course of illness ( $n = 504$ ), length of hospital stay ( $n = 316$ ), ICU admission ( $n = 554$ ), length of ICU stay ( $n = 34$ ), respiratory paresis ( $n = 419$ ), bladder dysfunction ( $n = 420$ ), rectal dysfunction ( $n = 419$ ), disturbance of sensibility ( $n = 418$ ), pain in extremities ( $n = 414$ ), and outcome at hospital discharge ( $n = 298$ ).

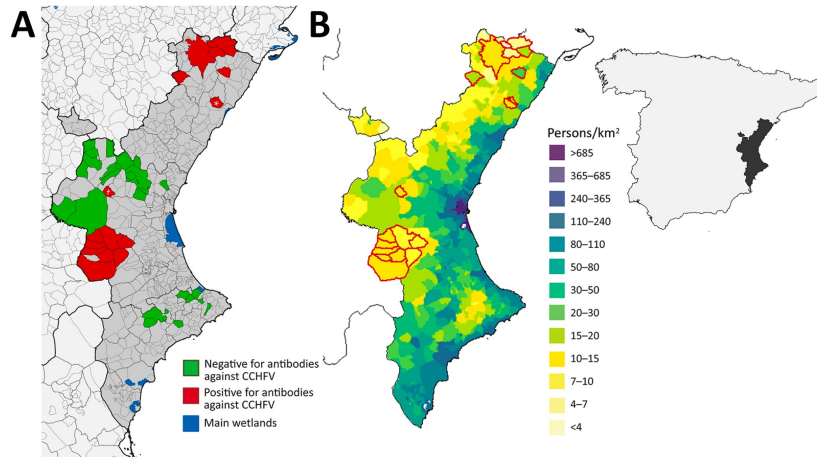
Kholmaier et al. Clinical Characteristics of Patients with Tick-Borne Encephalitis (TBE): A European Multicentre Study from 2010 to 2017. *Microorganisms*, June 2021



## Des tiques et des émergences

# Fièvre de Crimée Congo: en Espagne, mais pas en Corse

- Etude séroprévalence animale  
Sud Est Espagne (Valence) 2010-2021
- Sangliers(15%), bouquetins (96%),  
mouflons (100%)



Carrera-Faja et al. Evidence of Prolonged Crimean-Congo Hemorrhagic Fever Virus Endemicity by Retrospective Serosurvey, Eastern Spain. EID May 2022

23<sup>es</sup> JNI, Bordeaux du 15 au 17/06/2022

- Etude détection ARN dans 8051 tiques en Corse: toutes négatives

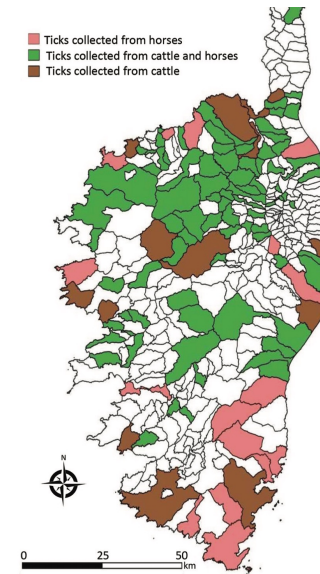


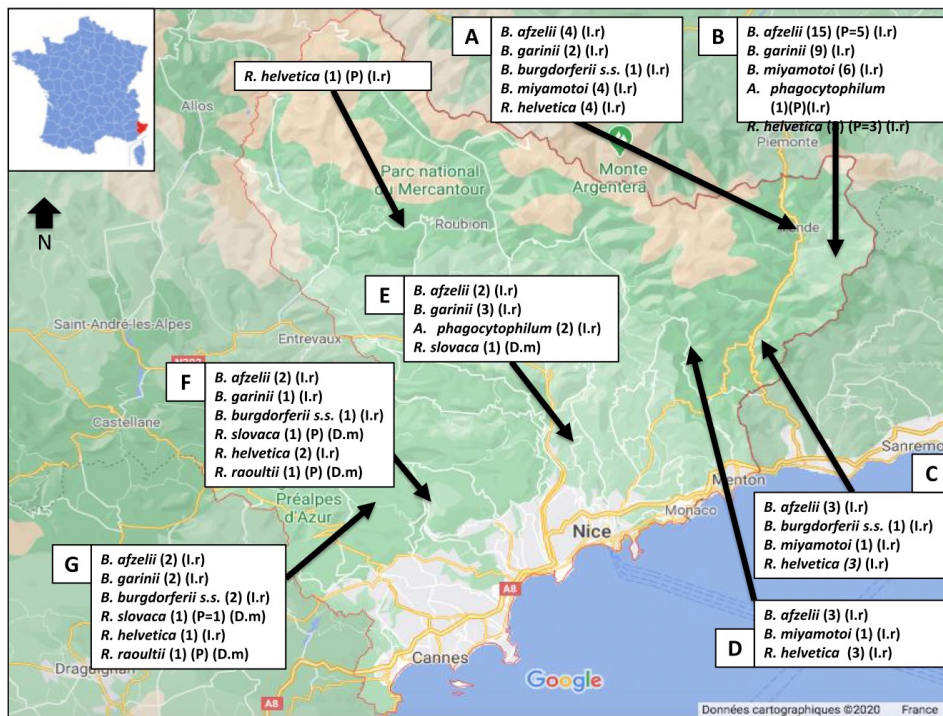
Figure. Locations of tick collection sites (for cattle and horses) for a study of Crimean-Congo Hemorrhagic fever virus in ticks from wild and domestic animals, Corsica, France, 2016-2020.

Cicculli et al. Lack of Evidence for Crimean-Congo Hemorrhagic Fever Virus in Ticks Collected from Animals, Corsica, France . EID May 2022



# Borrelia sp. et Sud-Est de la France

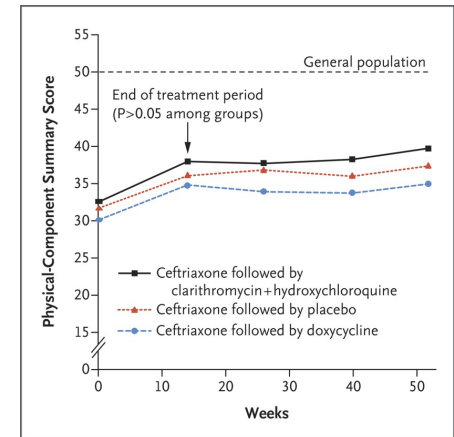
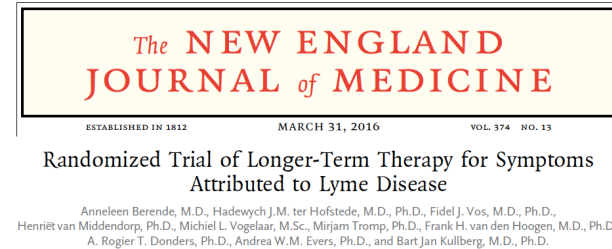
Collecte de 1232 tiques 2017-2020, 12% positives en PCR pour des pathogènes dont Borrelia!



Sevestre J et al. Detection of emerging tick-borne disease agents in the Alpes-Maritimes region, southeastern France  
Ticks and Tick Borne Dis. July 2021

# Borrélieuse de Lyme/PTLDS: attentes des patients et amélioration clinique

- Nouvelle analyse sur le travail de Berende *et al.*
- Impact du « degré d'attente » des patients concernant le traitement sur le pronostic fonctionnel (HRQoL)
- Les patients qui pensaient avoir reçu les ATB et attendaient une amélioration avaient de meilleurs résultats sur leur qualité de vie



Van Midendorp et al. Expectancies as predictors of symptom improvement after antimicrobial therapy for persistent symptoms attributed to Lyme disease. Clin Rheum. May 2021

# Rickettsioses: DEBONEL/SENLAT/TIBOLA

- Séries rétrospective Espagnole région la Rioja : 216 cas

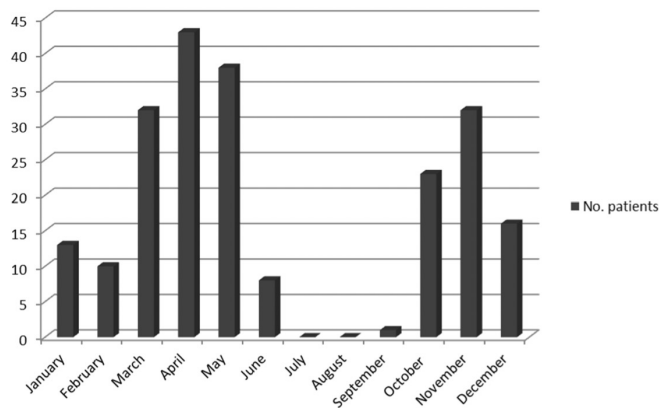


Figure 1. Monthly distribution of DEBONEL cases.

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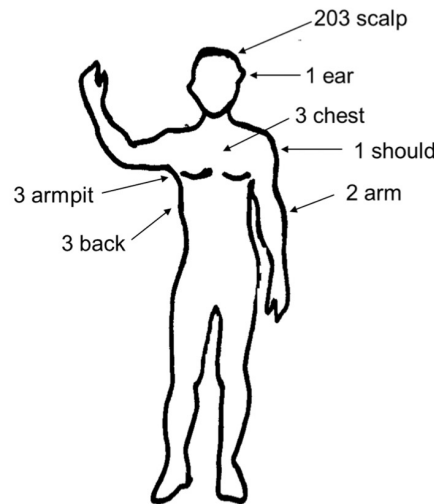
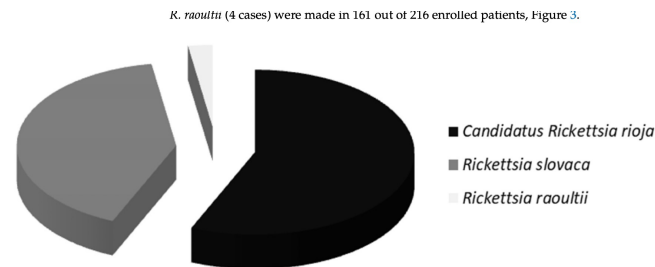


Figure 2. Location of skin lesions in DEBONEL patients.



Santibanez et al. Epidemiological, Clinical, and Microbiological Characteristics in a Large Series of Patients Affected by *Dermacentor*-Borne-Necrosis-Erythema-Lymphadenopathy from a Unique Centre from Spain. *Pathogens*. 2022 April



## La fièvre Q: des Pays-Bas à l'Amérique du Sud

# Fièvre Q aux Pays-Bas: 8 ans après l'épidémie

*Clinical Infectious Diseases*

MAJOR ARTICLE



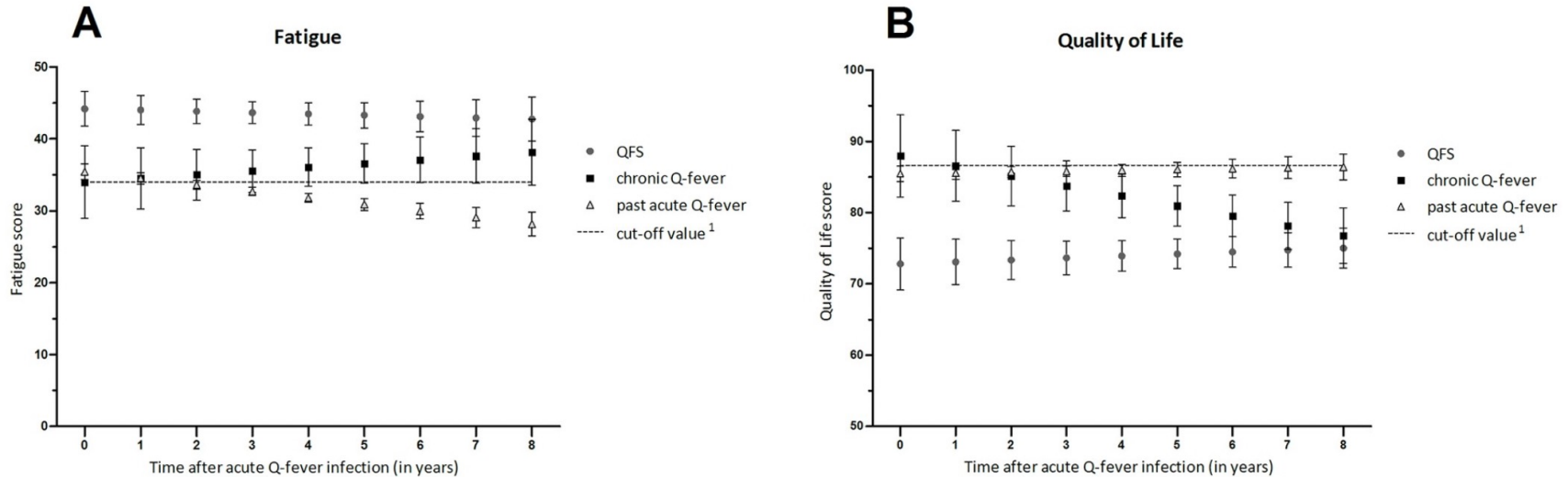
## Still New Chronic Q Fever Cases Diagnosed 8 Years After a Large Q Fever Outbreak

Sheila B. Buijs,<sup>1</sup> Chantal P. Bleeker-Rovers,<sup>2</sup> Sonja E. van Roeden,<sup>1</sup> Linda M. Kampschreur,<sup>3</sup> Andy I.M. Hoepelman,<sup>1</sup> Peter C. Wever,<sup>4</sup> and Jan Jelrik Oosterheert<sup>1</sup>

- **22,5% des patients mettent plus de 2 ans après la phase aiguë à être diagnostiqués**
- **Un patient: 9 ans après**
- **Mortalité Fièvre Q chronique: 26,5%**

# Fièvre Q aux Pays-Bas: 8 ans après

- QFS: Q Fever Fatigue Syndrome vs FQ chronique vs FQ aiguë guérie



Reukers et al. Impact of Q-fever on physical and psychosocial functioning until 8 years after *Coxiella burnetii* infection: An integrative data analysis. PlosOne. Feb 2022

# Fièvre Q: Amérique du Sud

- Guyane: Incidence à 27,4 cas/1000 Hbts

## PLOS NEGLECTED TROPICAL DISEASES

RESEARCH ARTICLE

High endemicity of Q fever in French Guiana: A cross sectional study (2007–2017)

Pauline Thill<sup>1,2</sup>, Carole Eldin<sup>3,4</sup>, Laureen Dahuron<sup>1</sup>, Alain Berlioz-Artaud<sup>5</sup>,  
Magalie Demar<sup>6,7</sup>, Mathieu Nacher<sup>8</sup>, Emmanuel Beillard<sup>5</sup>, Félix Djossou<sup>1,7</sup>,  
Loïc Epelboin<sup>1,7,8\*</sup>

## PLOS NEGLECTED TROPICAL DISEASES

RESEARCH ARTICLE

Seropositivity for *Coxiella burnetii* in suspected patients with dengue in São Paulo state, Brazil

Daniilo Alves de França<sup>1\*</sup>, Mateus de Souza Ribeiro Mioni<sup>1\*</sup>, Felipe Fornazari<sup>1</sup>, Ana Íris de Lima Duré<sup>2</sup>, Marcos Vinicius Ferreira Silva<sup>2</sup>, Fábio Sossai Possebon<sup>1</sup>,  
Virgínia Bodelão Richini-Pereira<sup>3</sup>, Helio Langoni<sup>1</sup>, Jane Megid<sup>1\*</sup>

1 Department of Veterinary Hygiene and Public Health, Paulista State University "Júlio de Mesquita Filho", Botucatu, São Paulo, Brazil, 2 Octávio Magalhães Institute, Ezequiel Dias Foundation, Belo Horizonte, Minas Gerais, Brazil, 3 Adolfo Lutz Institute, Regional Laboratories Center II, Bauru, São Paulo, Brazil

- Sao Paulo : 604 patients suspects de dengue, séroprévalence FQ: 21,4%

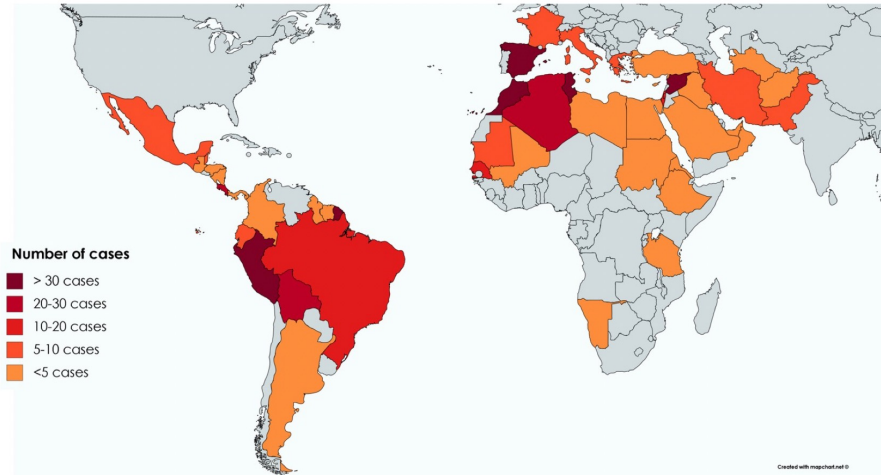


# Pathologies tropicales et Méditerranéennes






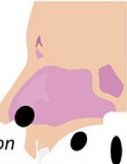

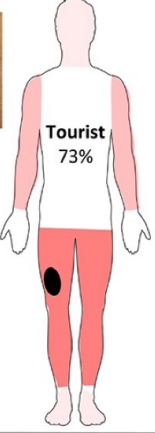



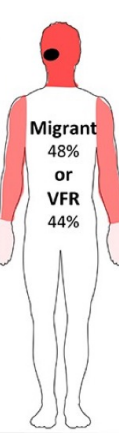

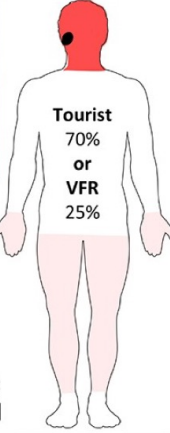
# Leishmanioses cutanées et muqueuses Europe

- **European Leishman Consortium : étude prospective clinique 459 patients 47 pays, espèce identifiée pour 198 patients (2006-2012)**



Guery et al. Clinical diversity and treatment results in Tegumentary Leishmaniasis: A European clinical report in 459 patients  
Plos Neglec Trop Dis. Oct 2021

23<sup>es</sup> JNI, Bordeaux du 15 au 17/06/2022

Infecting species	<i>L. braziliensis/L. guyanensis</i> N=52	<i>L. major</i> N=52	<i>L. tropica</i> N=26	<i>L. infantum</i> N=36
Mucosal involvement	<p>Low to moderate risk</p> <p>5.8% of patients</p> <p>100% with nasal lesion</p> 	<p>No risk</p> <p>0 case</p> 	<p>No risk</p> <p>0 case</p> 	<p>Moderate to high risk</p> <p>22% of patients</p> <p>54% with nasal lesion</p> 
Type and location of skin lesions	 <p>Ulcer 85%</p>  <p>Lymphangitis 40%</p> <p>1 lesion [1-3] ; 30 mm [20-50]</p>	 <p>Ulcer 63%</p> <p>Papule or nodule 23%</p>  <p>Lymphangitis 12%</p> <p>4 lesions [2-8] ; 30 mm [15-43]</p>	 <p>Ulcer 35%</p> <p>Papule 31%</p> <p>Squamous or Crust 30%</p>  <p>Lymphangitis 12%</p> <p>1 lesion [1-2] ; 20 mm [10-30]</p>	 <p>Ulcer 47%</p> <p>Squamous or Crust 28%</p> <p>Papule 25%</p>  <p>Lymphangitis 6%</p> <p>1 lesion [1-2] ; 20 mm [10-23]</p>
Skin lesions:	<p>Lesion(s)</p> <ul style="list-style-type: none"> <li>0-9% of lesions</li> <li>10-19% of lesions</li> <li>20-29% of lesions</li> <li>30-39% of lesions</li> <li>40-50% of lesions</li> </ul>			
Delay from first symptoms to the 1 <sup>st</sup> consultation [IQR]	3 [1.75-3] months	3 [2-4] months	6 [5-12] months	7 [3-12] months
Area of acquisition	<p>South &amp; Central America</p> <p>Peru French Guyana Bolivia Costa Rica</p>	<p>North &amp; West Africa</p> <p>Tunisia Algeria Senegal</p>	<p>Middle East &amp; North Africa</p> <p>Syria Tunisia Morocco</p>	<p>Mediterranean area</p> <p>Spain France Italy Malta</p>
Demographics	<p>Young male (71%)</p> <p>Median age [IQR]</p> <p>28 year-old [24-35]</p> <p>Immunocompromised 0%</p>	<p>Children &amp; young adults</p> <p>18 year-old [6-45]</p> <p>6%</p>	<p>Children &amp; adults</p> <p>26 year-old [11-75]</p> <p>0%</p>	<p>Middle-age adult</p> <p>56 year-old [47-66]</p> <p>18%</p>

Guery et al. Clinical diversity and treatment results in Tegumentary Leishmaniasis: A European clinical report in 459 patients

Plos Neglec Trop Dis. Oct 2021

23<sup>es</sup> JNI, Bordeaux du 15 au 17/06/2022

# Leishmanioses cutanées et muqueuses Europe

Healing rate	95/107 (89)		97/113 (86)		0-05
	Treatment received	Healing rate	Treatment received	Healing rate	
	No specific treatment *	17/21 (81)	Antimonial therapy (MA or SSG)	30/34 (88)	
	Intralesional MA or SSG +/- Cryotherapy **	70/75 (93)	Amphotericin B (liposomal or deoxycholate ***)	7/12 (58)	
	Topical Paromomycin	7/9 (78)	Fluconazole	11/12 (92)	
	Others: surgery (n = 1), imiquimod (n = 1)	1/2 (50)	Miltefosine	38/43 (88)	
			Pentamidine Isethionate	10/11 (91)	
			Other: SSG + pentoxifylline (n = 1)	1/1 (100)	

Guery et al. Clinical diversity and treatment results in Tegumentary Leishmaniasis: A European clinical report in 459 patients  
Plos Negl Trop Dis. Oct 2021



# Dengue

# Dengue: vaccin Takeda

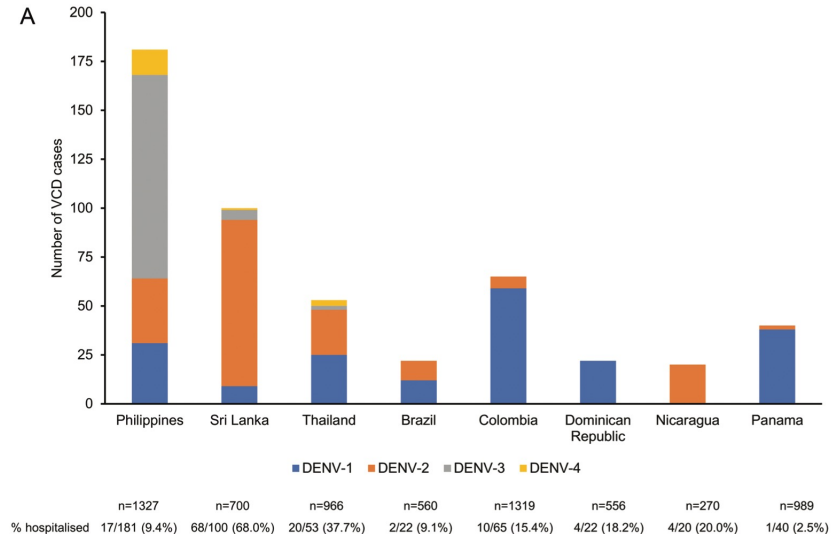
Clinical Infectious Diseases

MAJOR ARTICLE



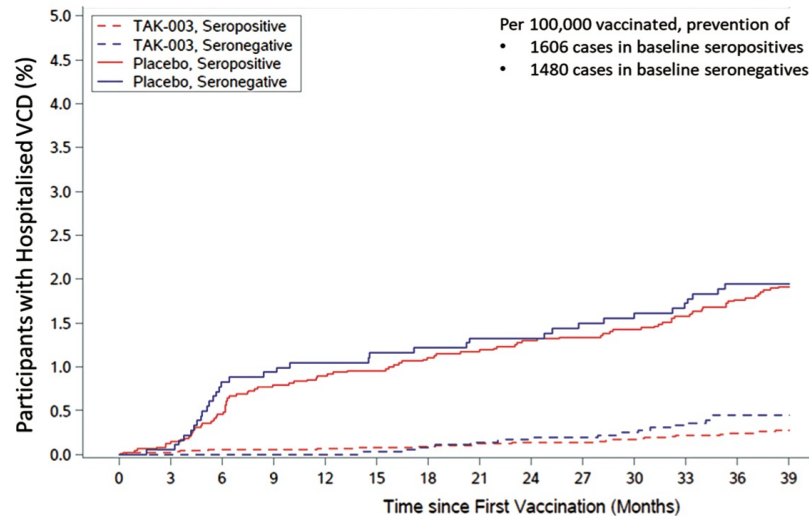
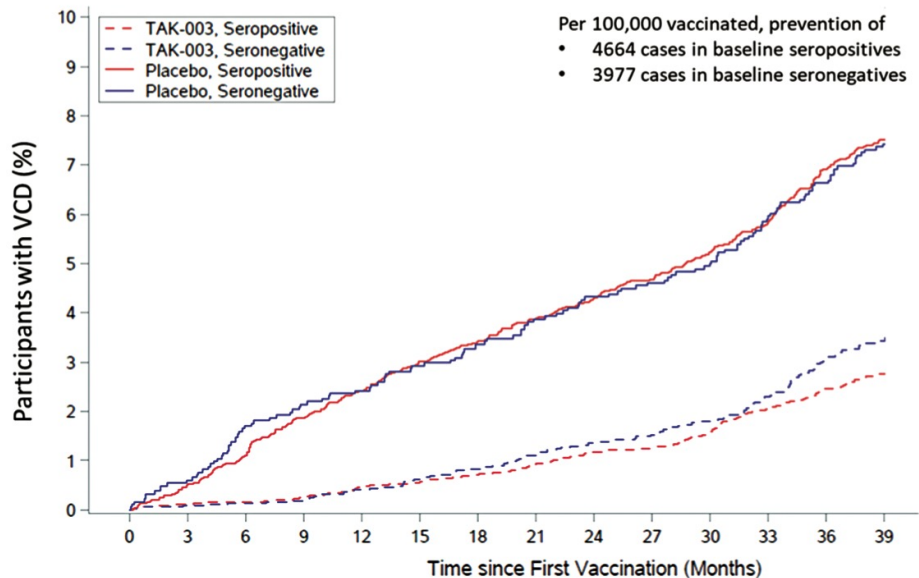
## Three-year Efficacy and Safety of Takeda's Dengue Vaccine Candidate (TAK-003)

- Essai de phase III, contrôlé randomisé en double aveugle vs placebo (n= 20 071) enfants et adolescents (4-16 ans)



# Dengue: vaccin Takeda

- Efficacité à 3 ans contre dengue: 62%, 83% sur hospitalisation,



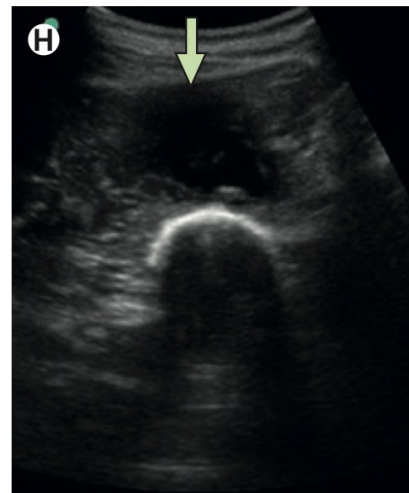
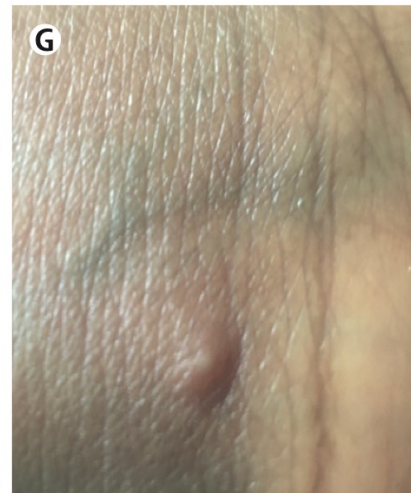
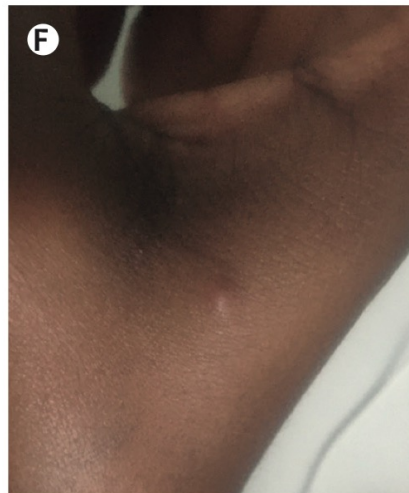
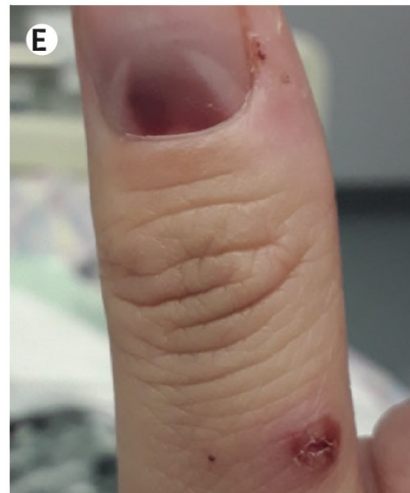
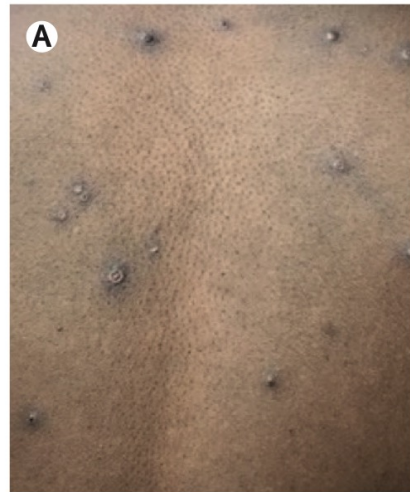
# Dengue: vaccin Takeda

- **Limites:**
  - Meilleure efficacité sur les séropositifs à baseline (65 vs 55 et 86 vs 77%)
  - Décroissance à 44% de protection la 3<sup>e</sup> année, mais toujours 70% efficacité sur hospitalisation
  - Manque de données sur DENV-3 et 4



# Monkeypox





## Epidemiology of four cases through sex

Andrea Antinori<sup>1</sup>, Valentin D'Abramo<sup>1</sup>, Stefania Cicala<sup>1</sup>, Cesare Ernesto Maria Grillo<sup>1</sup>, Emanuele Nicastrì<sup>1</sup>, the IN

- 4 cases
- Lesions
- PCR

### A. Anal lesions



### B. Genital lesions



### C. Skin lesions



5

6

7

9

11

# Monkeypox 2022

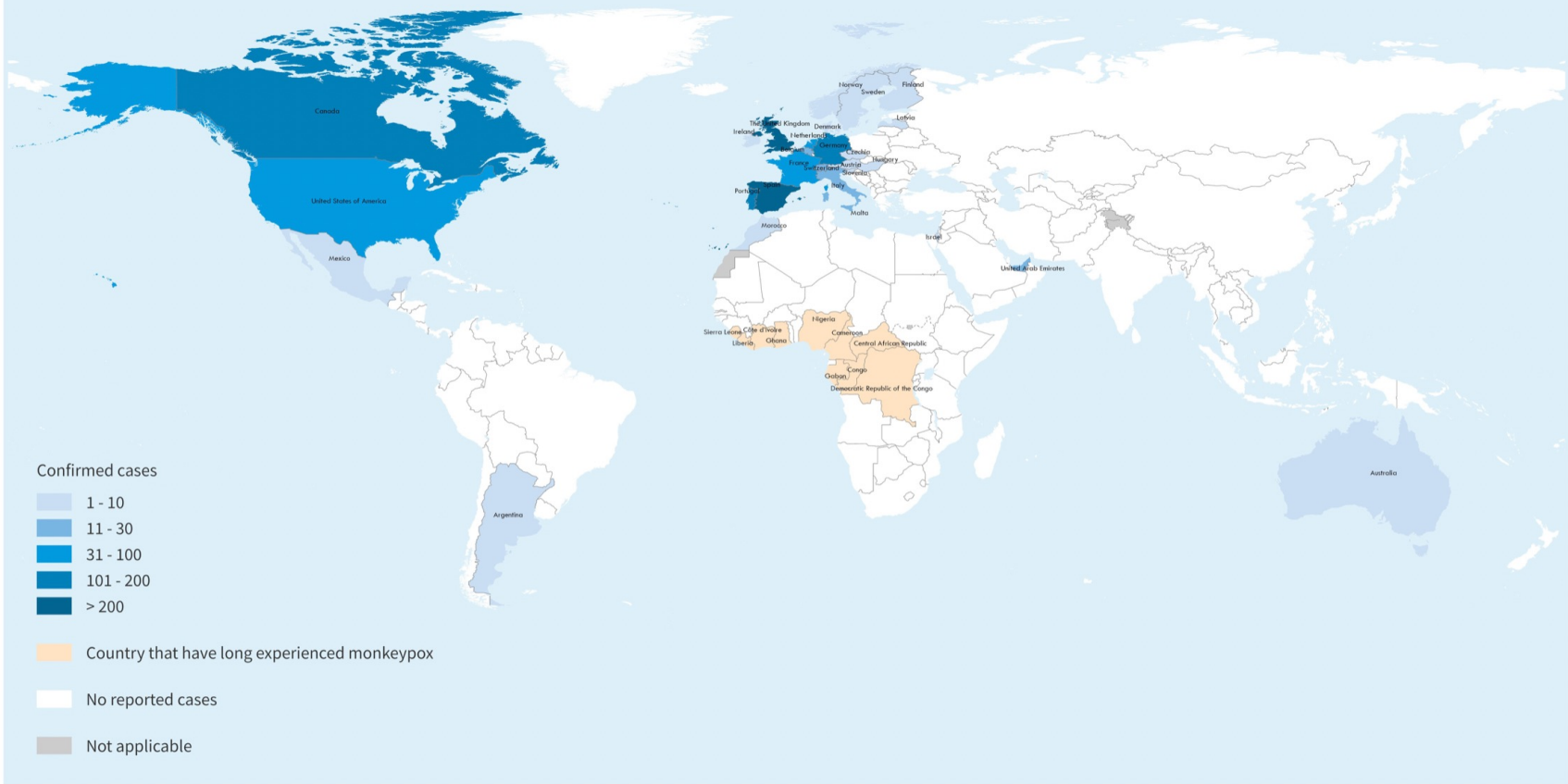


World Health  
Organization

## Multi-country monkeypox outbreak: situation update

10 June 2022

- **1285 cas dans 28 pays non touchés habituellement par la maladie**
- **Pas de décès**
- **87% en Europe**
- **Principalement suite à rapports sexuels et chez HSH**
- **Virus Clade Ouest-Africain**



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Data Source: World Health Organization  
 Map Production: WHO Health Emergencies Programme  
 Map Date: 10 June 2022



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## Merci de votre attention

