Simposi de Salut Internacional a l'Atenció Primària

10 de Maig 2013

Centre Esther Koplowitz

Àrea Integral de Salut Barcelona Esquerra

ISGlobal Barcelona Institute for Global Health

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Introducción de enfermedades tropicales transmitidas por vectores en España

Jose Muñoz
Secció de Medicina Tropical
Servei de Salut Internacional
Hospital Clinic. Barcelona

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2. Riesgo de introducción
3. Situación actual
4. Papel de la primaria

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Enfermedades transmitidas por vectores
Vector-Borne diseases

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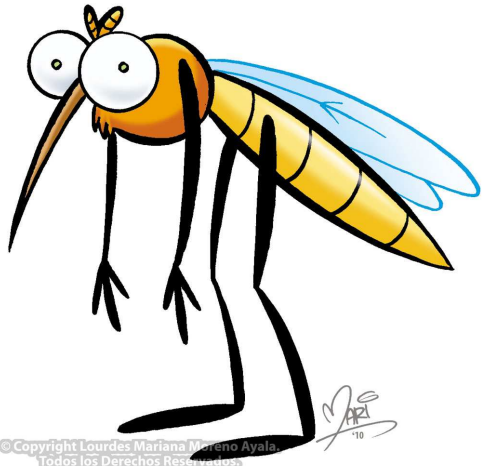

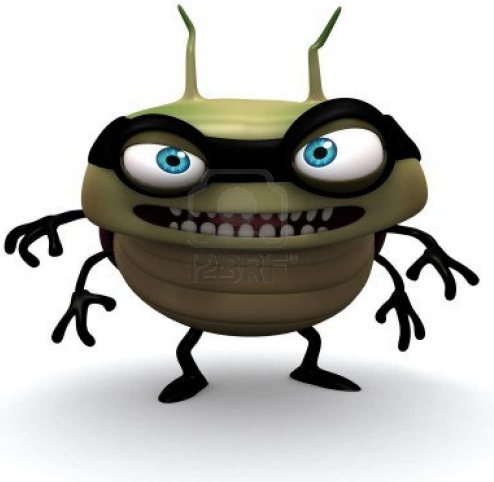

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Vectores

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Vector: *Aedes aegypti*

Dengue

Chikungunya

Vector: *Aedes albopictus*

Dengue

Chikungunya

Culex genus mosquito

West Nile

Vector: *Anopheles*

Malaria

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Malaria: Etiología

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- Malaria es una de las enfermedades parasitarias más importantes
- Género *Plasmodium*
- 5 especies humanas:
  - ***P. falciparum***
  - ***P. vivax***
  - *P. malariae*
  - *P. ovale*
  - *P. knowlesi*

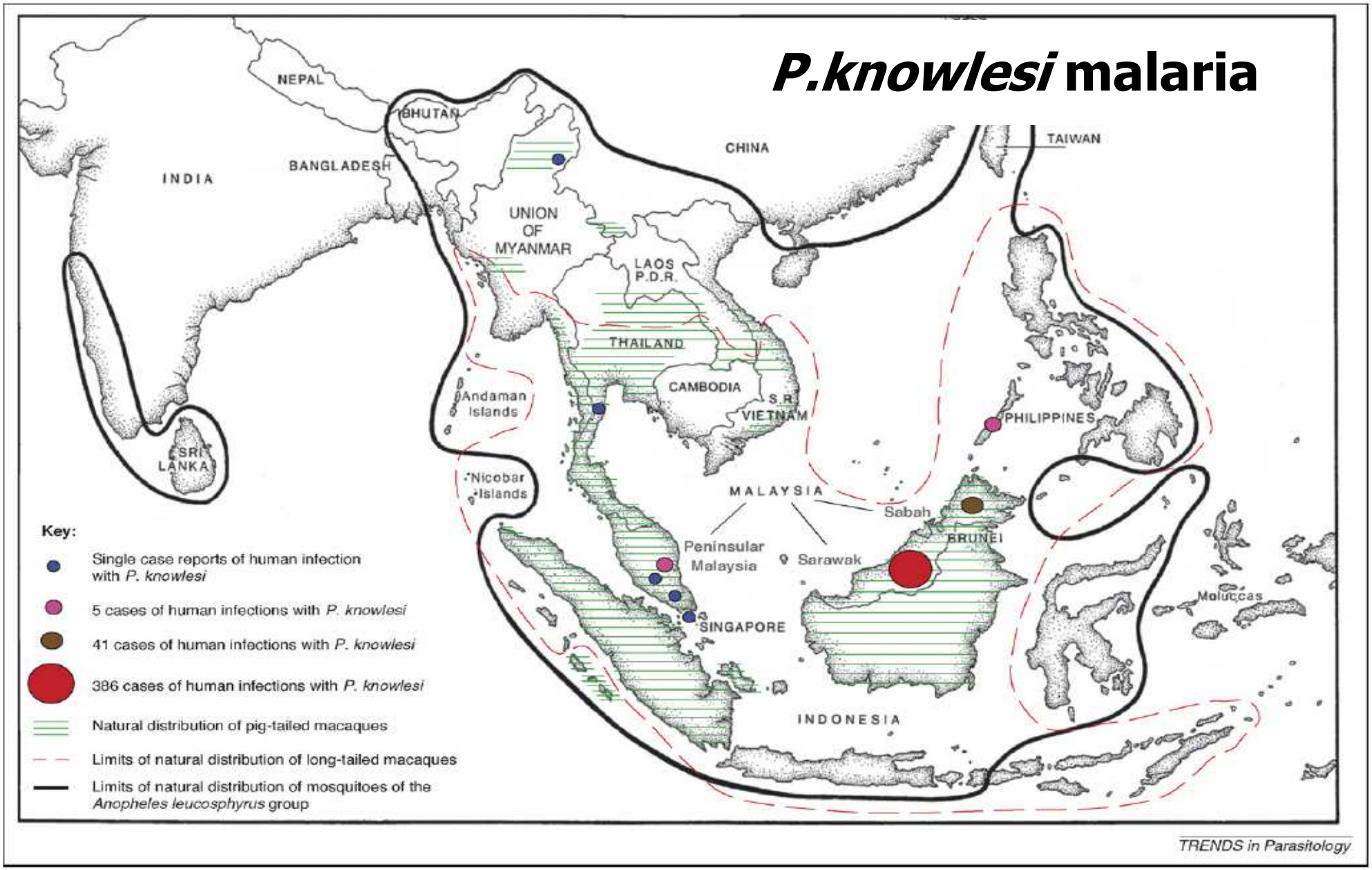
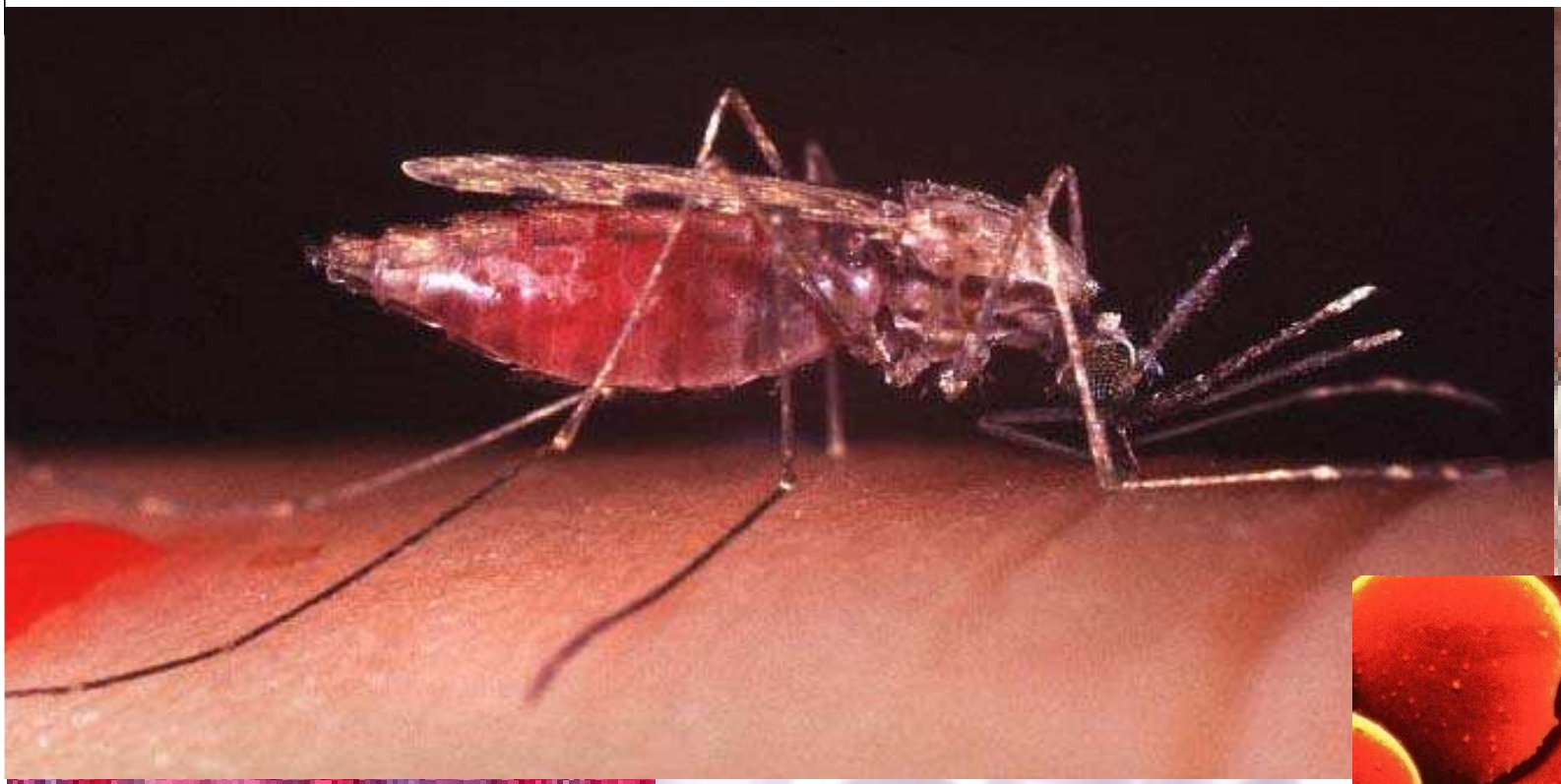
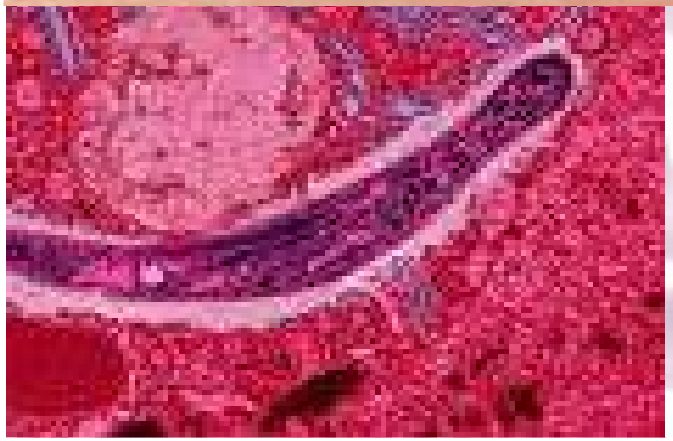
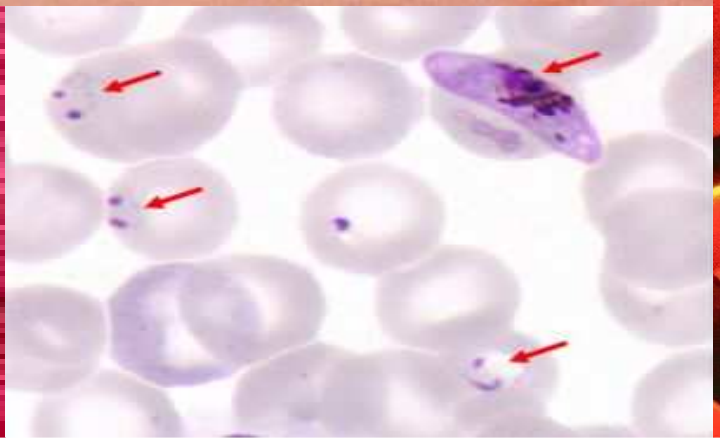


Figure 2. The number and distribution of reported human infections with *P. knowlesi*, the limits of natural distribution of two species of macaques and the limits of natural distribution of mosquitoes of the *An. leucosphyrus* group. All of the human cases of *P. knowlesi* shown were confirmed by sequencing and/or PCR [2,37–41] with the exception of two single cases in Peninsular Malaysia [10,13]. The map and known distribution of the *An. leucosphyrus* group were modified from Ref. [25], and the approximate distribution of long-tailed (*M. fascicularis*) and pig-tailed (*M. nemestrina*) macaques were adapted from Refs [27,28].

3 “actores” principales:
Mosquito, humano & parásito







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Carga de enfermedad

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- A nivel mundial, la malaria es responsable de
  - 215 millones casos en 106 países
  - + / - 655.000 muertes anuales (1 cada 45 segundos)
  - 7% de todas las muertes globales en <5a
- África subsahariana lleva la peor parte
  - 90% de todas las muertes por malaria
  - 85% de todos los casos de malaria
  - La malaria representa el 15% de todas las muertes <5a
- En las zonas endémicas, afecta especialmente a los niños pequeños y las mujeres embarazadas

WHO. The World malaria report. 2010; Available from: http://www.who.int/malaria/world_malaria_report_2009/en/index.htm

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Malaria importada en Europa

	2008	2009	2010	2011
Europa	5.640	4.108	6.260	3.925
UK	1.370	1.495	1.761	1.677
France	2.239	2.218	2.438	ND
Spain	295	362	346	404

WHO Regional Office for Europe. Centralized information system for Infectious Diseases. 2012

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Malaria importada en Barcelona

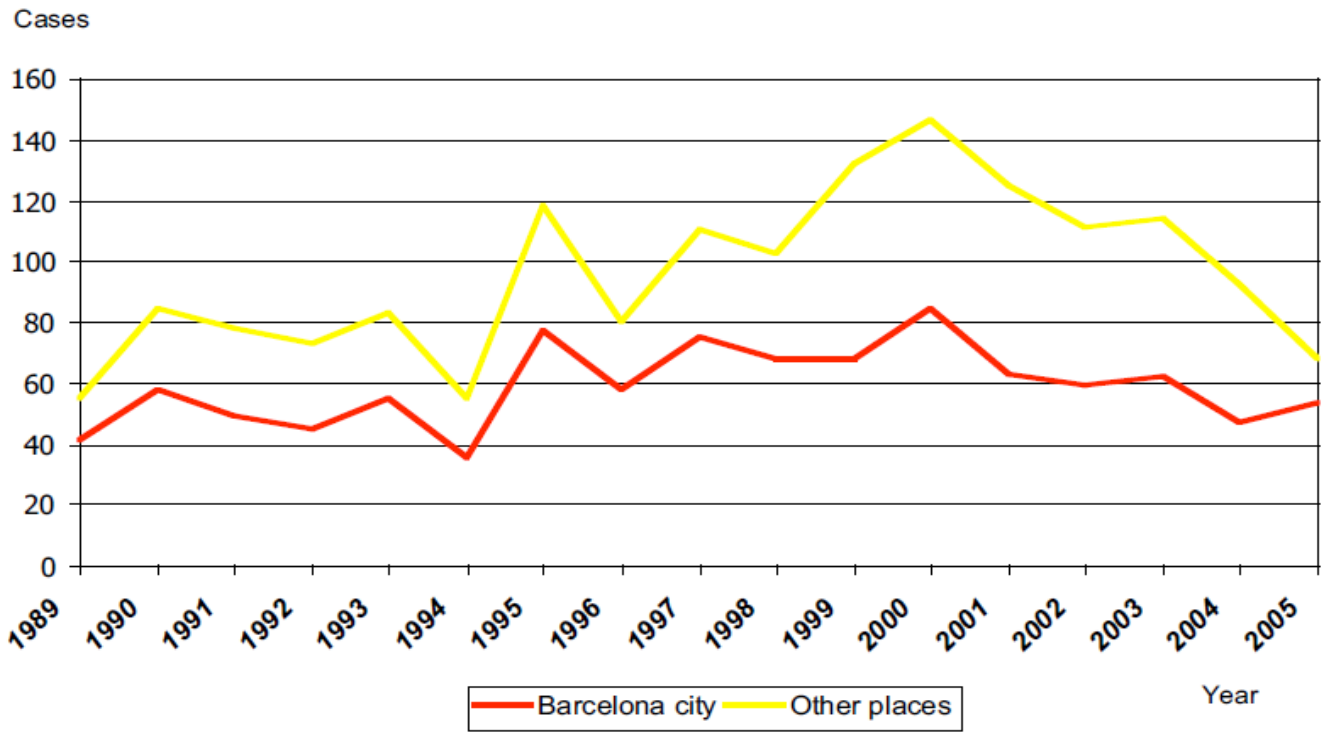

Figure 1
Evolution of notified malaria cases in Barcelona according to notification year and place of residence (1989–2005).

Millet JP et al. Malaria Journal. 2008

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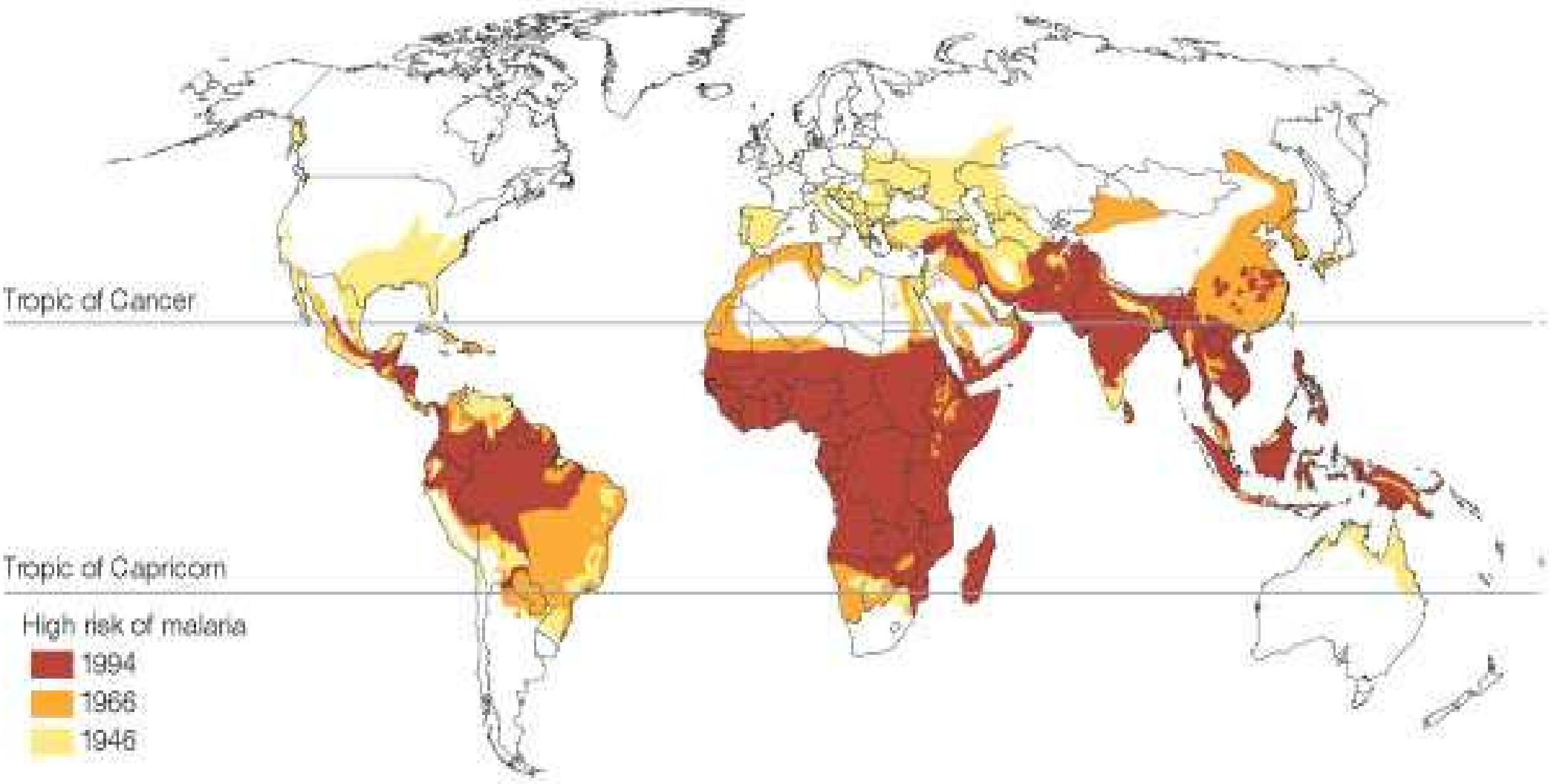
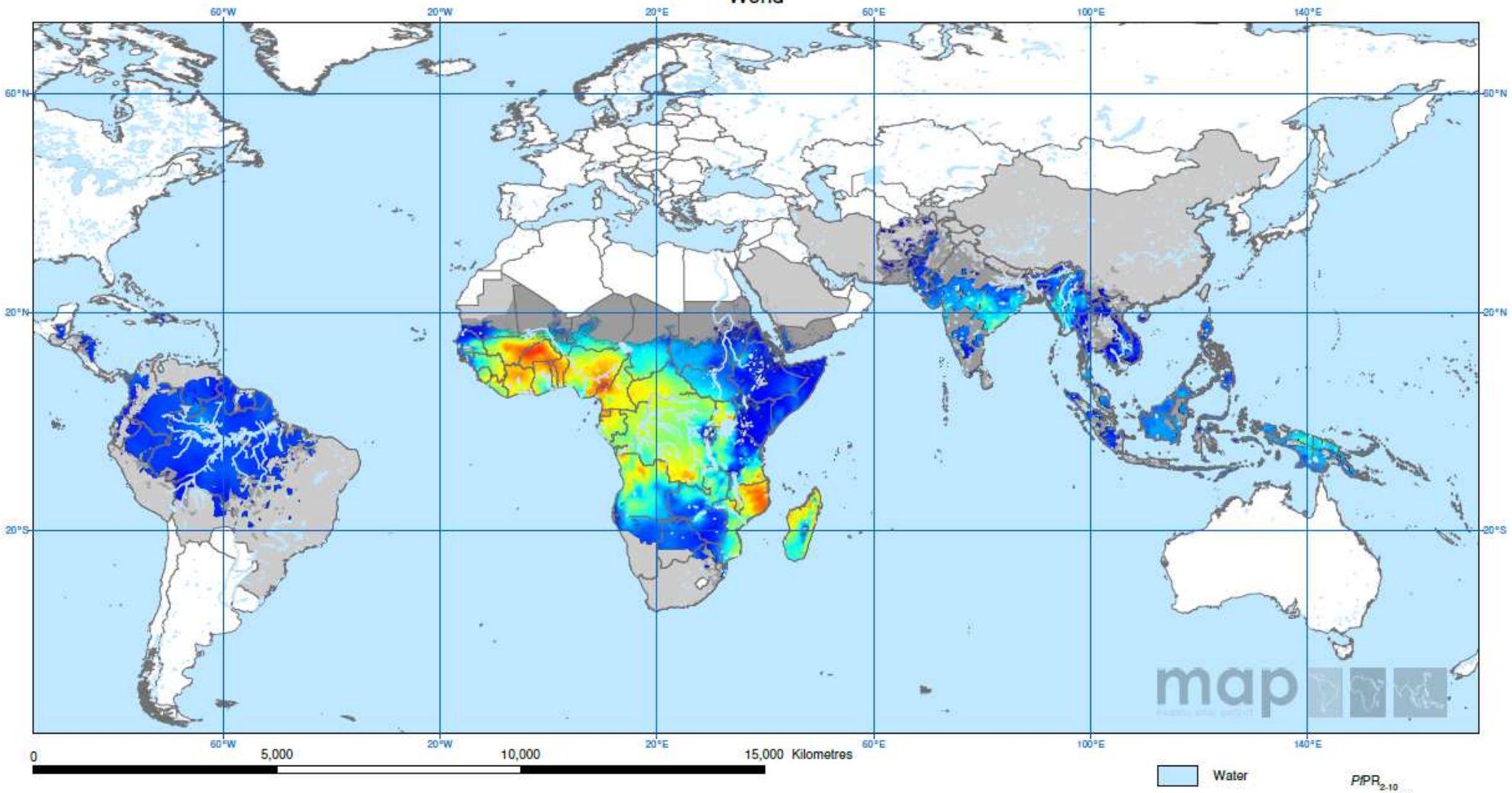
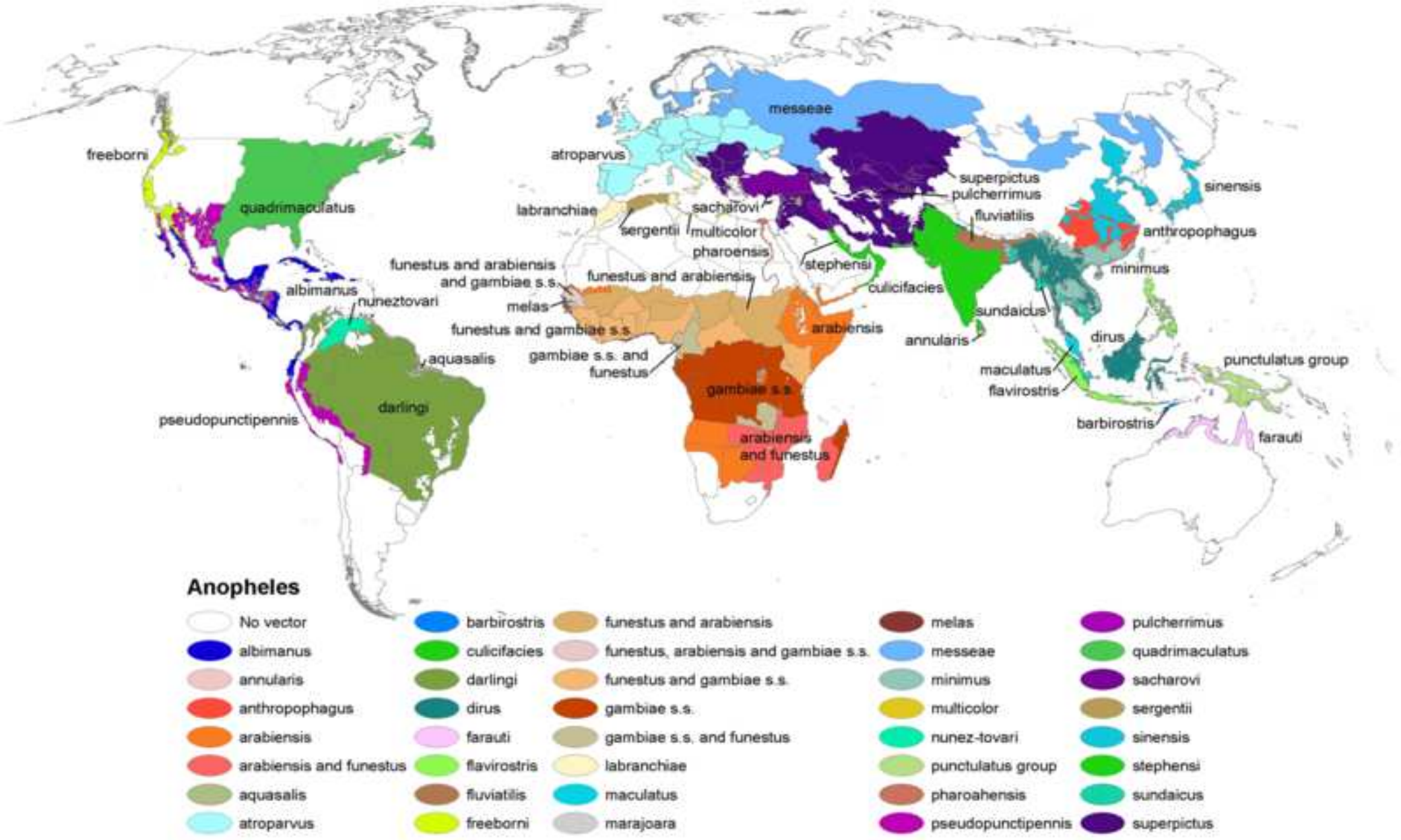


The spatial distribution of *Plasmodium falciparum* malaria endemicity in 2010
World



Mean point estimates of the age-standardised annual mean *Plasmodium falciparum* parasite rate in two to ten year olds ($PfPR_{2-10}$) within the spatial limits of stable transmission. Areas of no risk and unstable risk (*Pf*API < 0.1‰) are also shown.

Gething, P.W.*, Patil, A.P.*, Smith, D.L.*, Guerra, C.A., Elyazar, I.R.F., Johnston , G.L., Tatem, A.J. and Hay, S.I. (2011). **A new world malaria map: *Plasmodium falciparum* endemicity in 2010.** *Malaria Journal*, **10**: 378. BMC highly accessed article. *indicates equal authorship.


freeborni
quadrimaculatus
albimanus
nuneztovari
aquasalis
darlingi
pseudopunctipennis
atroparvus
messeae
labranchiae
sacharovi
sergentii
multicolor
pharoensis
funestus and arabiensis and gambiae s.s.
funestus and arabiensis
melas
funestus and gambiae s.s.
gambiae s.s. and funestus
arabiensis
gambiae s.s.
arabiensis and funestus
superpictus
pulcherrimus
fluviatilis
stephensi
culicifacies
annularis
sundaicus
sinensis
anthropophagus
minimus
dirus
punctulatus group
maculatus
flavirostris
barbirostris
farauti
Anopheles
No vector
albimanus
annularis
anthropophagus
arabiensis
arabiensis and funestus
aquasalis
atroparvus
barbirostris
culicifacies
darlingi
dirus
farauti
flavirostris
fluviatilis
freeborni
funestus and arabiensis
funestus, arabiensis and gambiae s.s.
funestus and gambiae s.s.
gambiae s.s.
gambiae s.s. and funestus
labranchiae
maculatus
marajoara
melas
messeae
minimus
multicolor
nunez-tovari
punctulatus group
pharoahensis
pseudopunctipennis
pulcherrimus
quadrimaculatus
sacharovi
sergentii
sinensis
stephensi
sundaicus
superpictus

RAPID COMMUNICATIONS

First autochthonous malaria case due to *Plasmodium vivax* since eradication, Spain, October 2010

P Santa-Olalla Peralta (psantaolalla@msps.es)[1], M C Vazquez-Torres[1], E Latorre-Fandós[2], P Mairal-Claver[3], P Cortina-Solano[4], A Puy-Azón[4], B Adiego Sancho[5], K Leitmeyer[6], J Lucientes-Curdi[7], M J Sierra-Moros[1]

1. Coordinating Centre for Health Alerts and Emergencies, Ministry of Health and Social Policy, Madrid, Spain
2. Haematology Department, Hospital San Jorge, Huesca, Spain
3. Microbiology Department, Hospital San Jorge, Huesca, Spain
4. Sub-directorate General of Public Health of Huesca, Regional Health Service of Aragón, Huesca, Spain
5. Service of Public Health Surveillance, Directorate General of Public Health of Aragón, Regional Health Service of Aragón, Zaragoza, Spain
6. European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden
7. Animal Pathology Department, Veterinary School, Universidad de Zaragoza, Zaragoza, Spain

Citation style for this article:
Santa-Olalla Peralta P, Vazquez-Torres MC, Latorre-Fandós E, Mairal-Claver P, Cortina-Solano P, Puy-Azón A, Adiego Sancho B, Leitmeyer K, Lucientes-Curdi J, Sierra-Moros MJ. First autochthonous malaria case due to Plasmodium vivax since eradication, Spain, October 2010. Euro Surveill. 2010;15(41):pii=19684. Available online: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19684

Article published on 14 October 2010

SURVEILLANCE AND OUTBREAK REPORTS

Malaria in Greece, 1975 to 2010

A Vakali (annita86@windowslive.com)[1], E Patsoula[2], G Spanakos[1], K Danis[1], E Vassalou[2], N Tegos[2], A Economopoulou[1], A Baka[1], A Pavli[1], C Koutis[3], C Hadjichristodoulou[4], T Kremastinou[1,2]

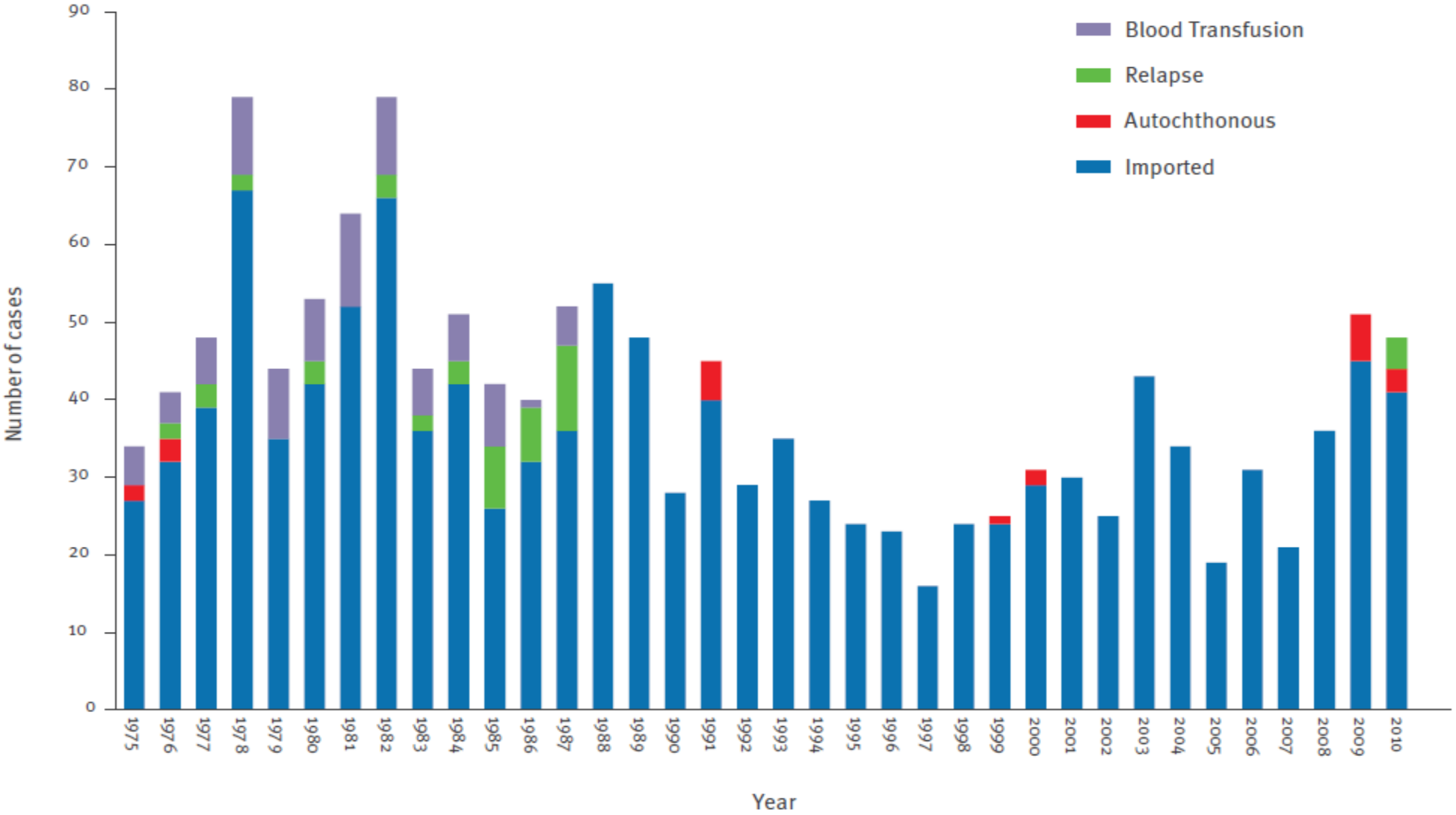
1. Hellenic Centre for Diseases Control and Prevention, Athens, Greece
2. National School of Public Health, Athens, Greece
3. Technological Educational Institute of Athens, Athens, Greece
4. Department of Hygiene and Epidemiology, Medical Faculty, University of Thessaly, Greece

Citation style for this article:
Vakali A, Patsoula E, Spanakos G, Danis K, Vassalou E, Tegos N, Economopoulou A, Baka A, Pavli A, Koutis C, Hadjichristodoulou C, Kremastinou T. Malaria in Greece, 1975 to 2010. Euro Surveill. 2012;17(47):pii=20322. Available online: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20322

Article submitted on 11 June 2012 / published on 22 November 2012

FIGURE 1

Number of malaria cases according to the source of malaria infection, Greece, 1975–2010 (n=1,419)



Vakali, Eurosurv, 2012

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Dengue

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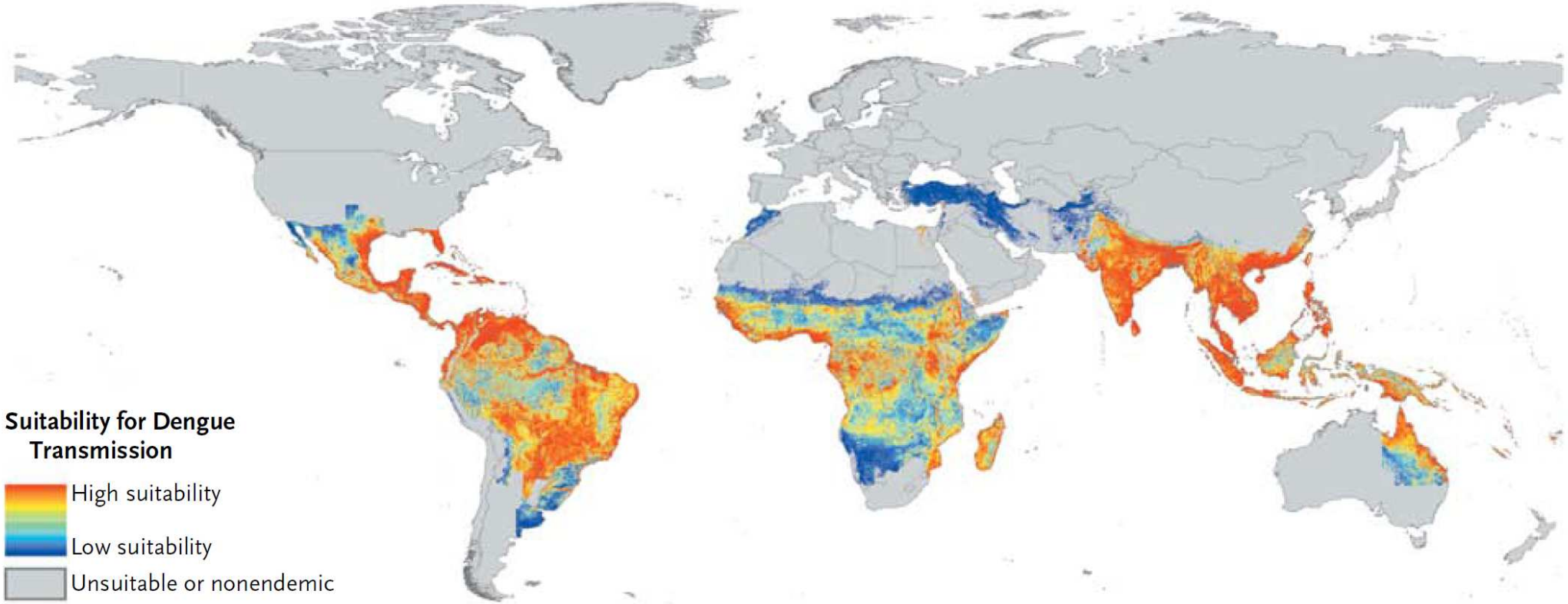
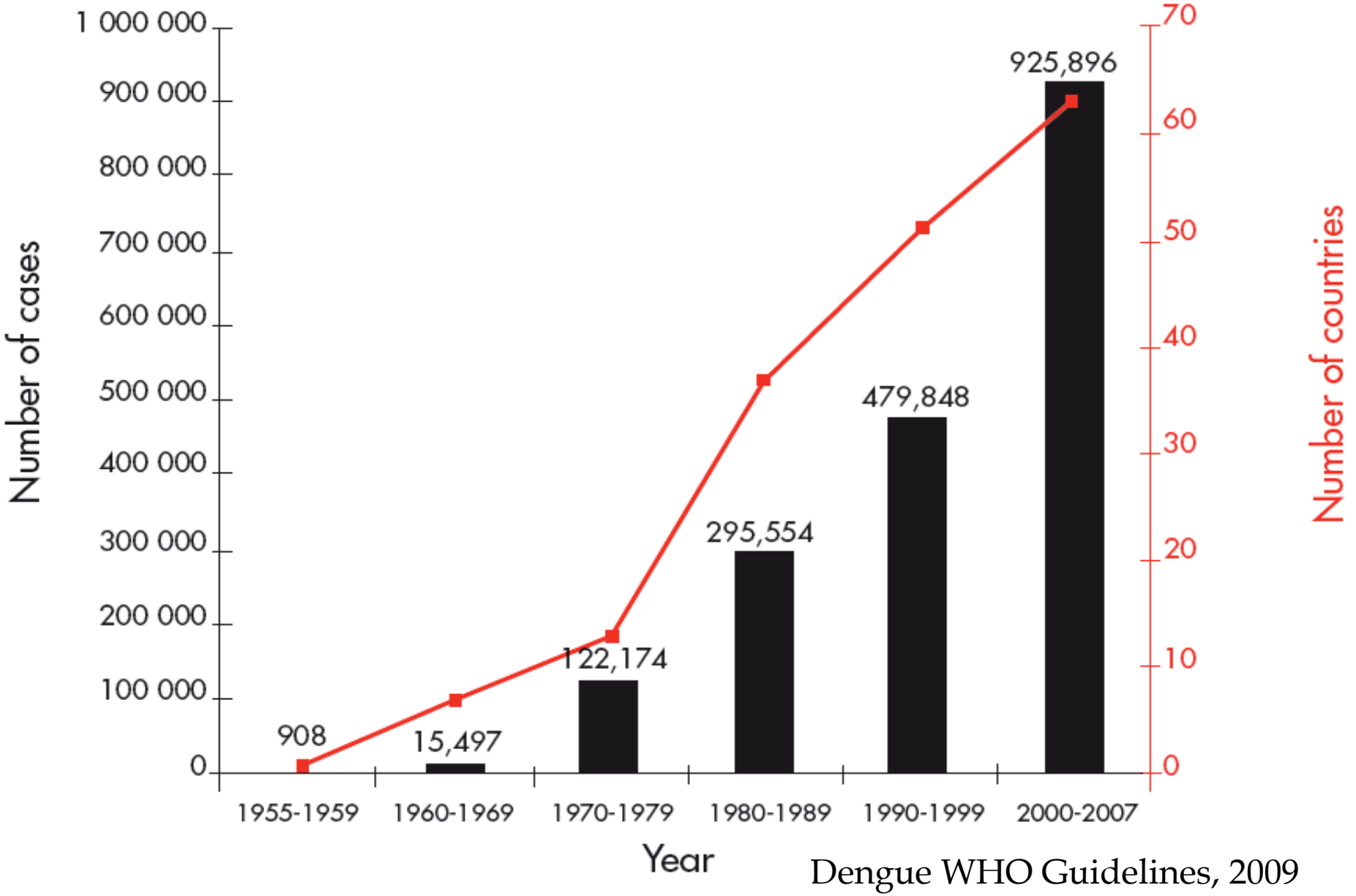


- 2 billones de personas en riesgo
- > 50 millones de casos/año
- Endémica y epidémica

Figure 1.2 Average annual number of dengue fever (DF) and dengue haemorrhagic fever (DHF) cases reported to WHO, and of countries reporting dengue, 1955–2007



Dengue WHO Guidelines, 2009

Halstead Dengue, Lancet 2007

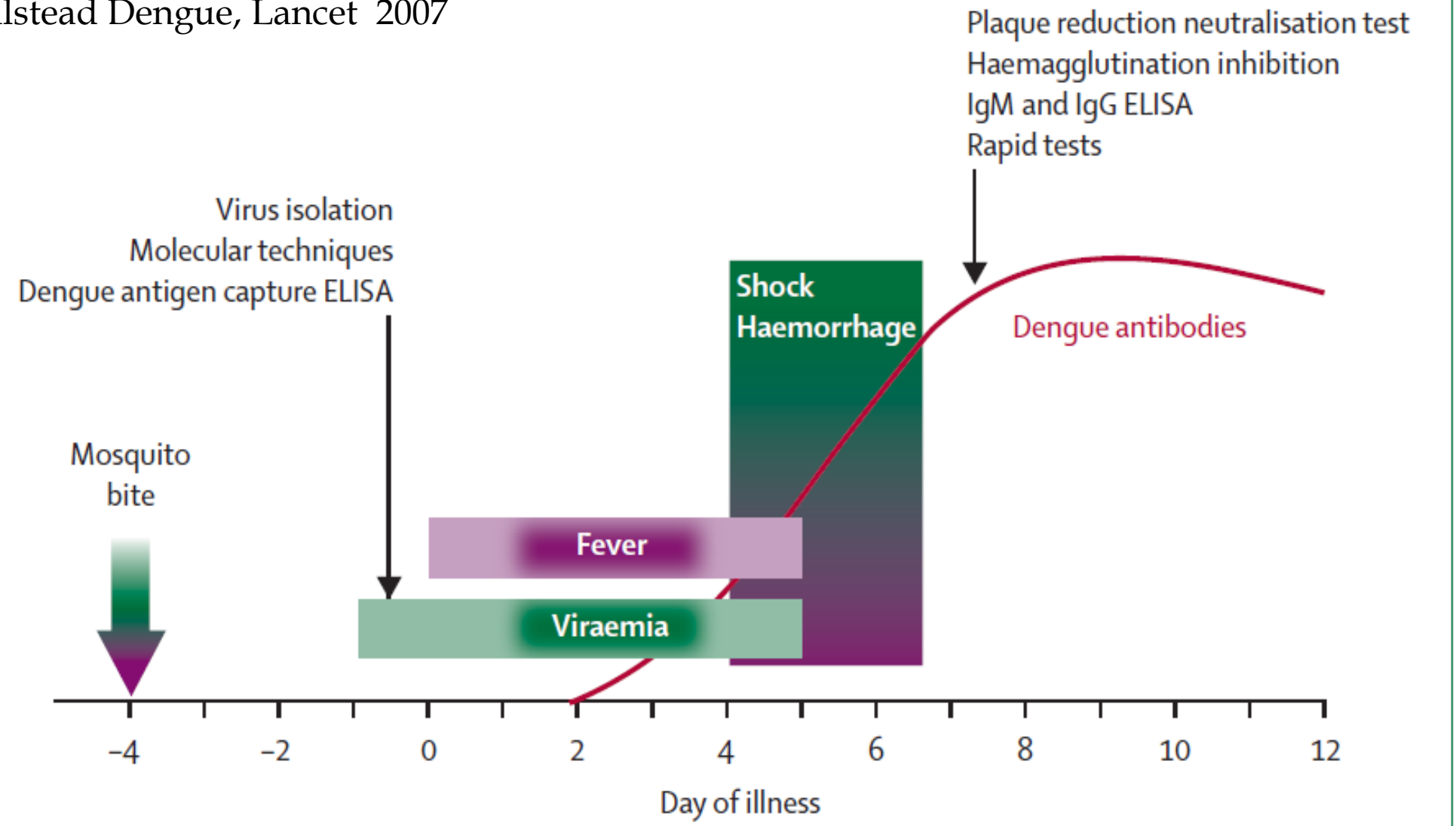
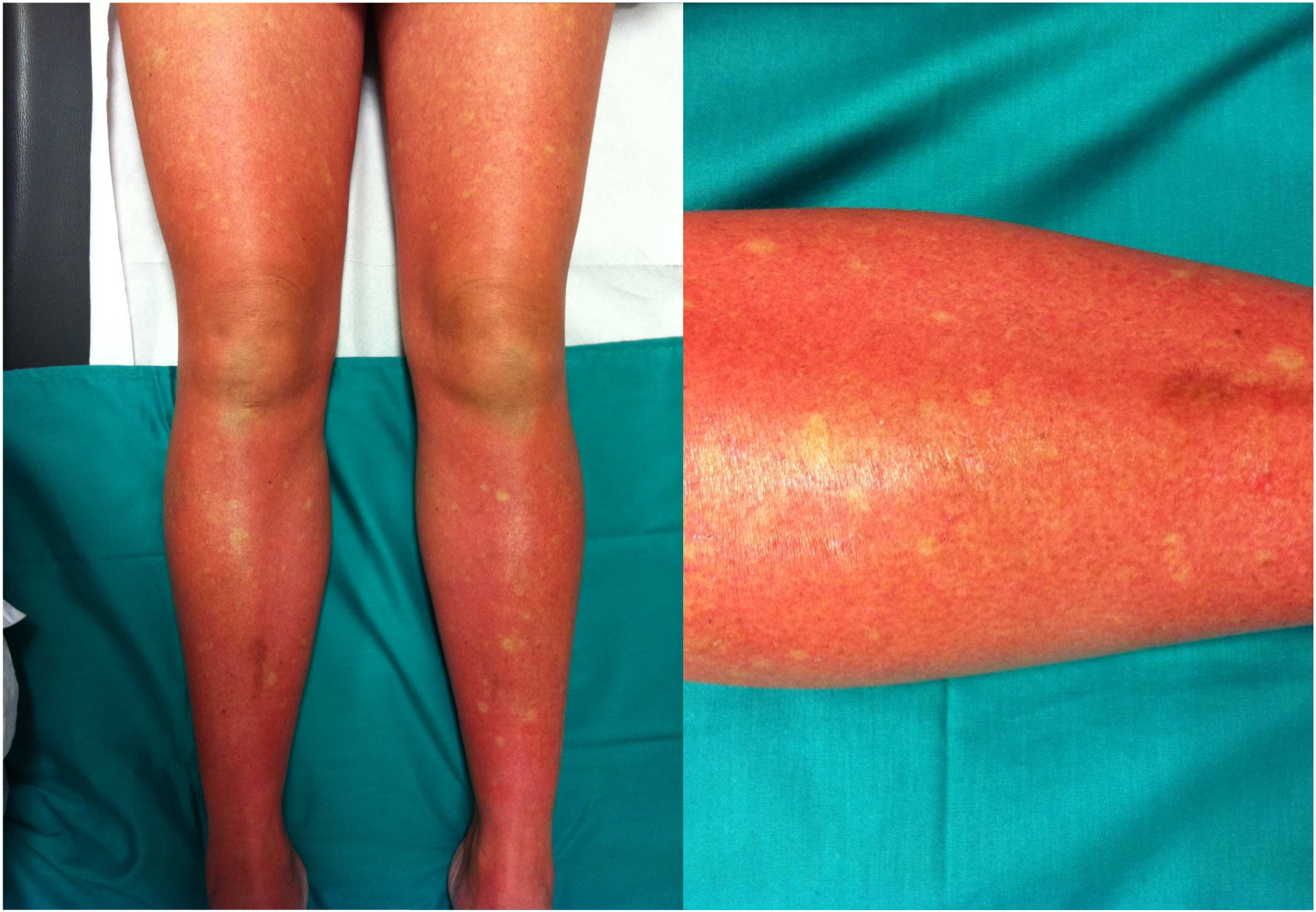


Figure 3: **Course of dengue infection and timings of diagnosis**

Published with permission of Timothy Endy, Syracuse University, Syracuse, NY, USA.



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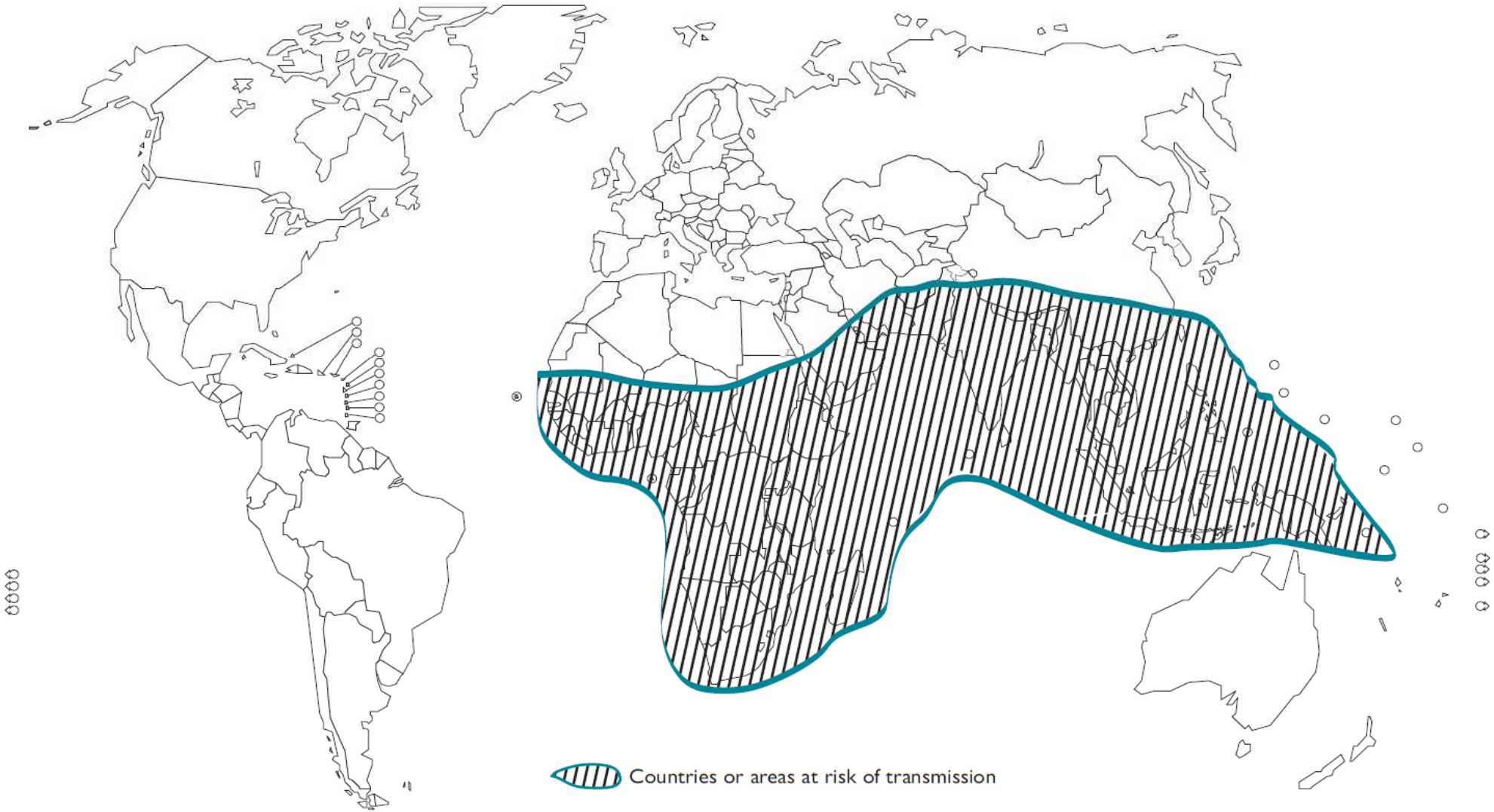
Chikungunya

WHO data, 2009



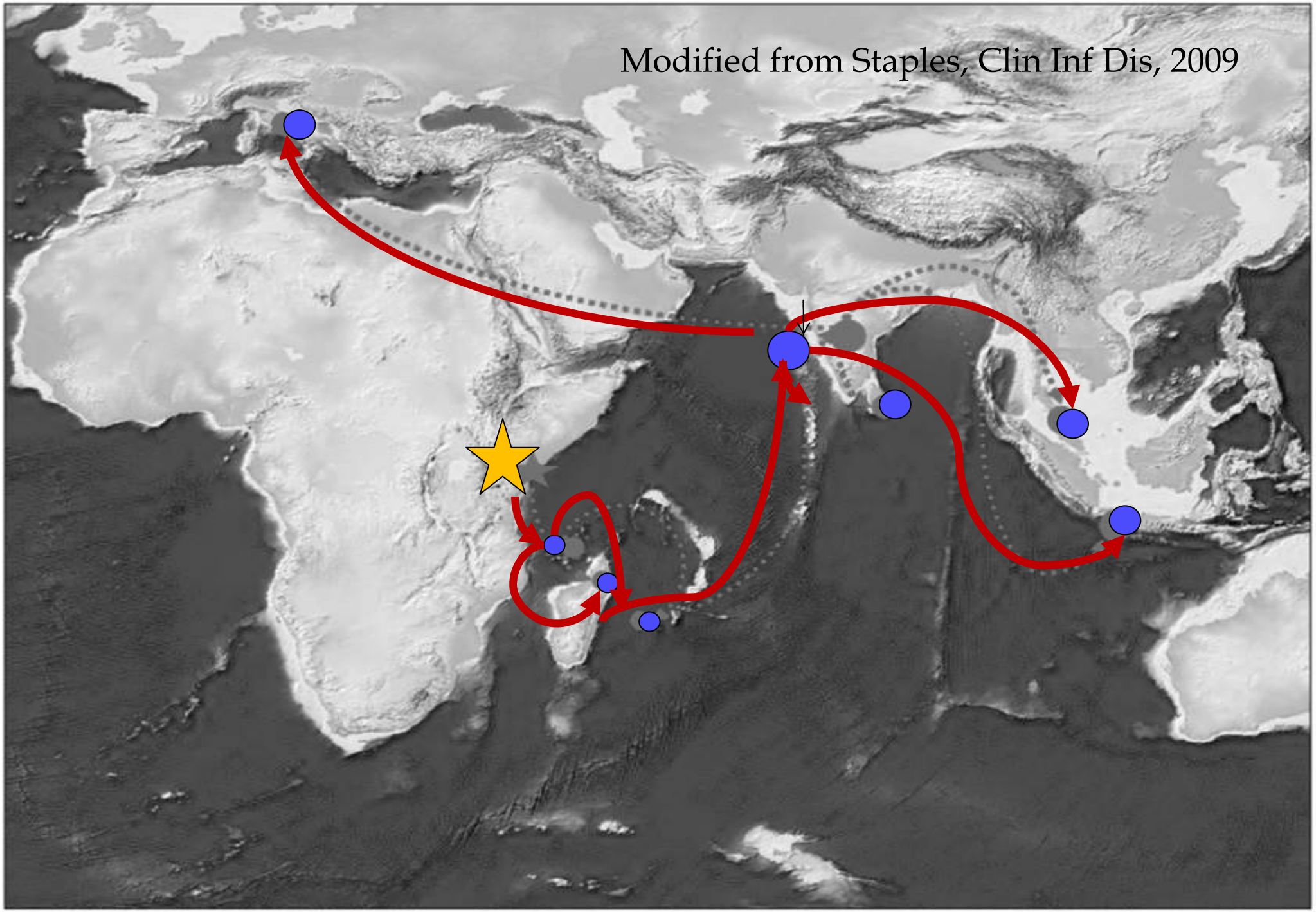

Modified from Staples, Clin Inf Dis, 2009

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Table 1. Comparison of the Clinical Features of Chikungunya Fever and Dengue Fever

Clinical features	Chikungunya virus infection	Dengue virus infection
Fever (temperature, >38.9°C)	+++	++
Myalgias	+	++
Arthalgias	+++	+/−
Headache	++	++[a]
Rash	++	+
Bleeding dyscrasias	+/−	++
Shock	−	+/−
Leukopenia	++	+++
Neutropenia	+	+++
Lymphopenia	+++	++
Thrombocytopenia	+	+++

NOTE. The mean frequencies of symptoms were determined from studies where the 2 diseases were directly compared among patients seeking care. Symbols indicate the percentage of patients exhibiting each feature: +++, 70%–100% of patients; ++, 40%–69%; +, 10%–39%; +/−, <10%; −, 0% [8, 65].

[a] Headache was often retro-orbital.

Staples, Clin Infect Dis, 2009

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237 pacientes con criterios inclusión*

203 (85,65%) CHIKV confirmado

Seguimiento 1er mes

Dolor articular > 1 mes 75%
Tumefacción articular > 1 mes 31,5%
Astenia > 1 mes 30%
Otros síntomas > 1 mes 10%

Seguimiento 10º mes

100/203 (49,3%) síntomas atribuibles a CHIKV
- 46% dolor articular
- 13% astenia
- 6% hormigueo/entumecimiento

* Más de 10 años, fiebre, dolor articular o ambos

Manimunda, Trans R Soc Trop Med Hyg, 2010

Ae.albopictus

Outermost regions

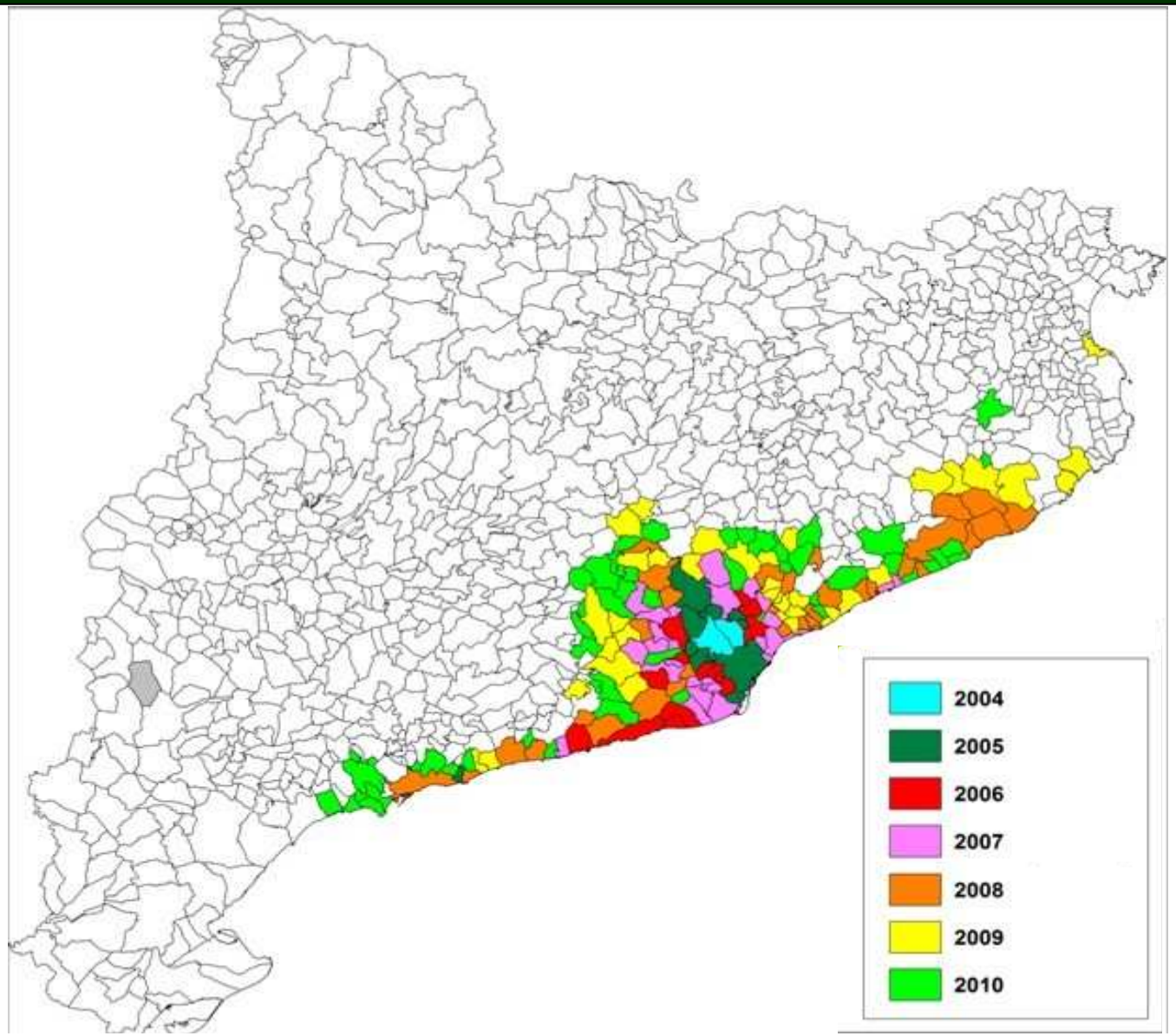
- Azores (PT)
- Canary Islands (ES)
- Madeira (PT)
- Svalbard/Jan Mayen (NO)

ECDC 2012/VBORNET

Ae.albopictus

Comissió Interinstitucional per a la Prevenció i Control del Mosquit Tigre a Catalunya

ESTRATÈGIA PER A LA PREVENCIÓ I EL CONTROL DEL MOSQUIT TIGRE A CATALUNYA



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RAPID COMMUNICATIONS

First two autochthonous dengue virus infections in metropolitan France, September 2010

G La Ruche (g.laruche@invs.sante.fr)[1], Y Souarès[1], A Armengaud[2], F Peloux-Petiot[3], P Delaunay[4], P Desprès[5], A Lenglet[6], F Jourdain[7], I Leparc-Goffart[8], F Charlet[3], L Ollier[4], K Mantey[6], T Mollet[6], J P Fournier[4], R Torrents[2], K Leitmeyer[6], P Hilairet[4], H Zeller[6], W Van Bortel[6], D Dejour-Salamanca[1], M Grandadam[5], M Gastellu-Etchegorry[1]

RAPID COMMUNICATIONS

Autochthonous dengue fever in Croatia, August–September 2010

I Gjenero-Margan (epidemiologija@hzjz.hr)[1], B Aleraj[1], D Krajcar[2], V Lesnikar[2], A Klobučar[2], I Pem-Novosel[1], S Kurečić-Filipović[1], S Komparak[3], R Martić3, S Đuričić[4], L Betica-Radić[4], J Okmadžić[5], T Vilibić-Čavlek[1], A Babić-Erceg[1], B Turković[1], T Avšić-Županc[6], I Radić[1], M Ljubić[7], K Šarac[1], N Benić[2], G Mlinarić-Galinović[1]

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Infection with chikungunya virus in Italy: an outbreak in a temperate region

G Rezza*, L Nicoletti*, R Angelini, R Romi, A C Finarelli, M Panning, P Cordioli, C Fortuna, S Boros, F Magurano, G Silvi, P Angelini, M Dottori, M G Ciufolini, G C Majori, A Cassone, for the CHIKV study group†

Lancet 2007; 370: 1840–46
See Comment page 1805

Summary

Background Chikungunya virus (CHIKV), which is transmitted by *Aedes* spp mosquitoes, has recently caused several outbreaks on islands in the Indian Ocean and on the Indian subcontinent. We report on an outbreak in Italy.

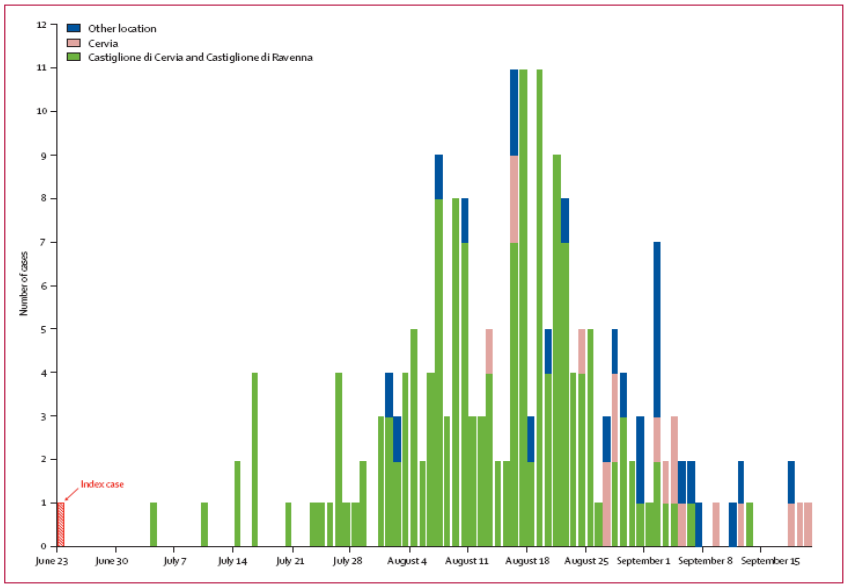
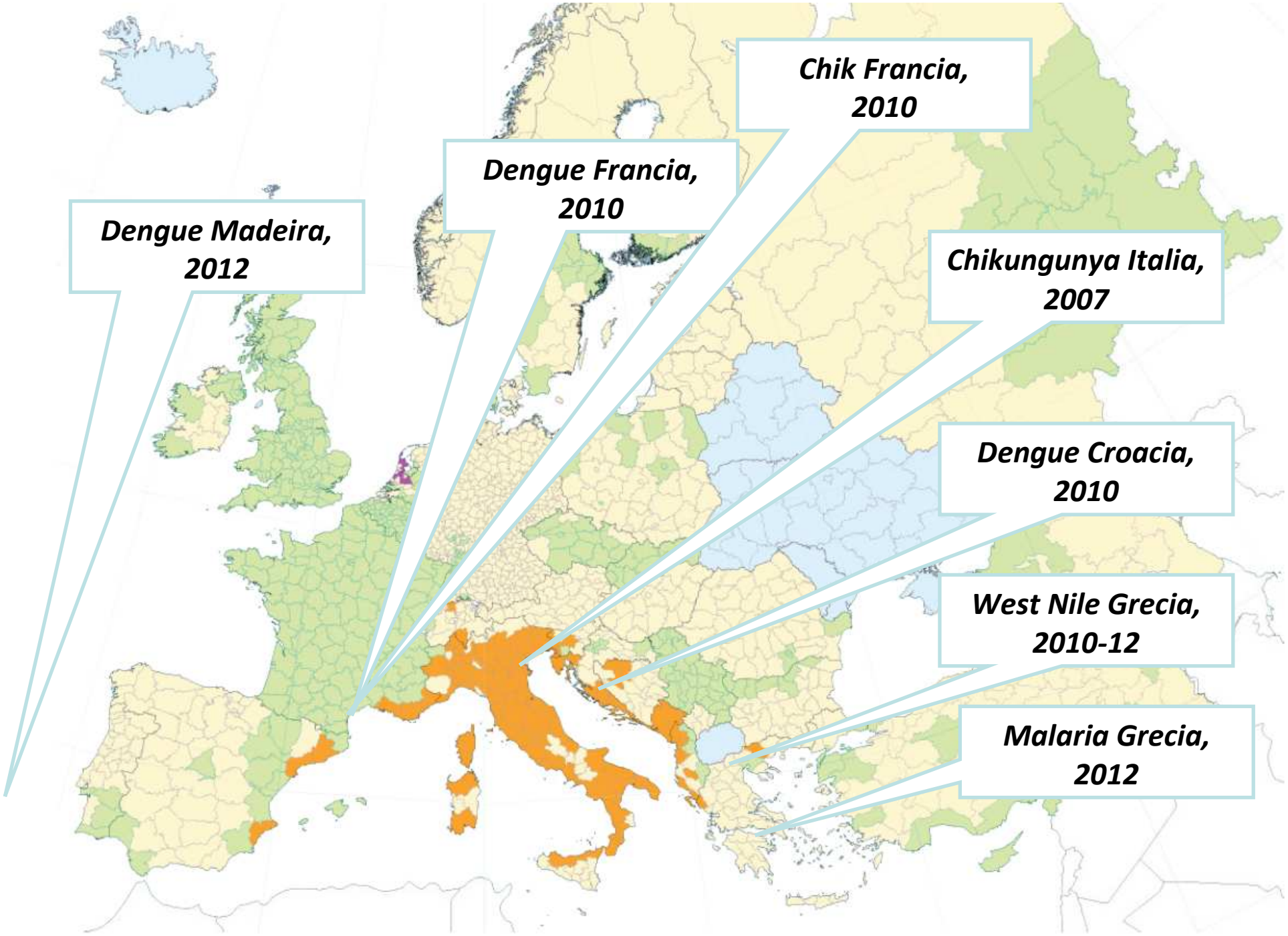


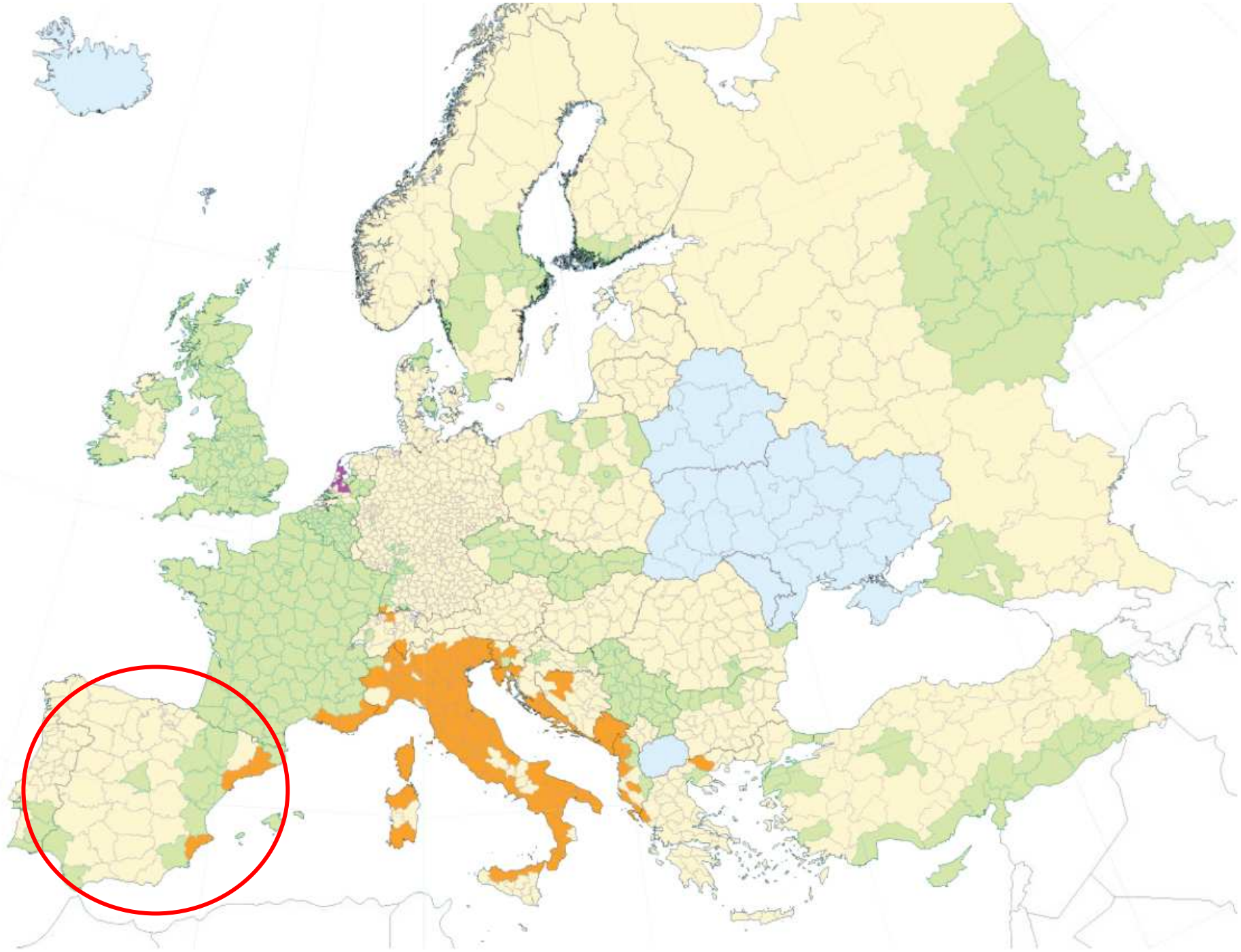
Figure 1: **Epidemic curve**
Distribution of dates of onset of symptoms for CHIKV cases by presumed place of infection (ie, Castiglione di Cervia and Castiglione di Ravenna, Cervia, or other/unknown location).

Chikungunya Virus, Southeastern France

Marc Grandadam, Valérie Caro, Sébastien Plumet, Jean-Michel Thiberge, Yvan Souarès, Anna-Bella Failloux, Hugues J. Tolou, Michel Budelot, Didier Cosserat, Isabelle Leparc-Goffart, and Philippe Desprès

In September 2010, autochthonous transmission of chikungunya virus was recorded in southeastern France, where the *Aedes albopictus* mosquito vector is present. Sequence analysis of the viral genomes of imported and autochthonous isolates indicated new features for the potential emergence and spread of the virus in Europe.


Chik Francia, 2010
Dengue Francia, 2010
Dengue Madeira, 2012
Chikungunya Italia, 2007
Dengue Croacia, 2010
West Nile Grecia, 2010-12
Malaria Grecia, 2012



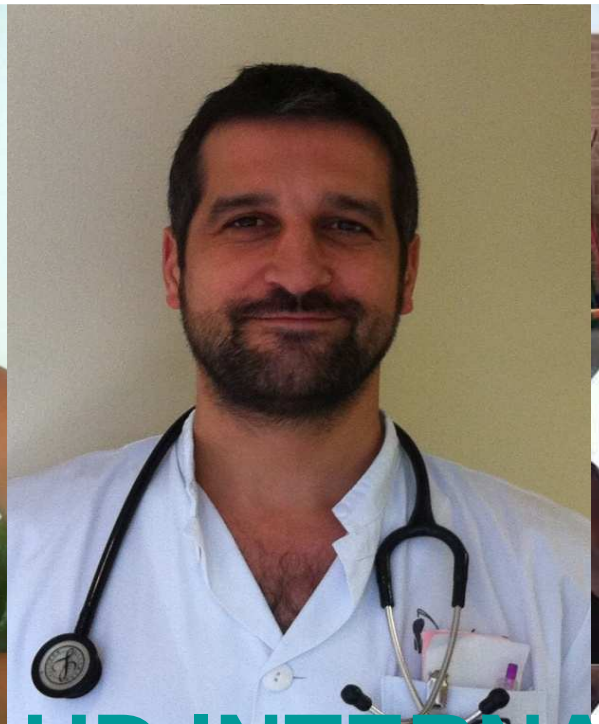
Puntos clave

-Movilidad importante de enfermedades infecciosas

-Presencia de vector (sin infección)

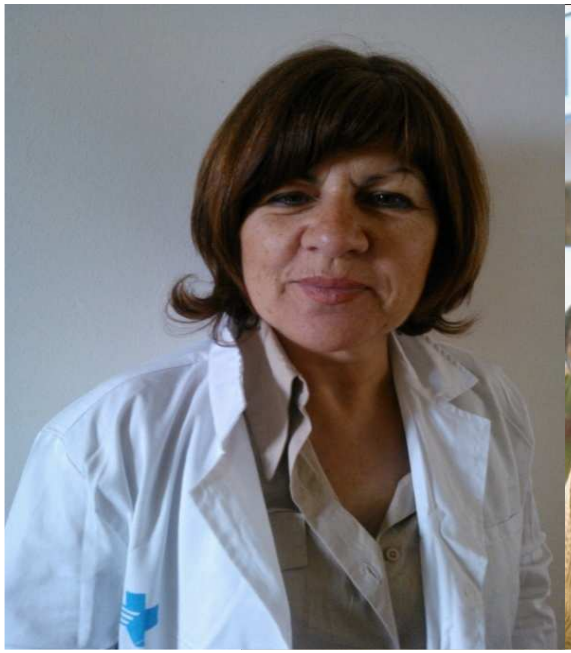
-Necesidad de establecer sistemas de vigilancia






GRUPO AIS-BE SALUD INTERNACIONAL

2009-2013





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Edel Aldasoro aldasoro@clinic.ub.es

eliasmoron@gmail.com

http://www.jamesonnotodofilmfest.com/cortos.html?id=cw512e82883053b

Reported cases of West Nile fever for the EU and neighbouring countries

Transmission season 2012 and previous transmission seasons; latest update: 30/11/2012