

Management of Travel-related Diseases

- Syllabus -

Schedule Dates:	Course start: January 12th, 2026 Course end: February 28th, 2026
Student Investment Time	7 weeks. 100 hours
Modality	Asynchronous: Students can complete the activities and participation at their own pace, following the learning itinerary milestones and assessment deadlines.
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Faculty Coordinator:	Daniel Camprubí Ferrer. daniel.camprubi@isglobal.org
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Faculty: From the International Health Department - Hospital Clinic Barcelona. Barcelona institute for Global Health	Jose Muñoz Gutierrez Alex Almuedo Riera Natalia Rodríguez Valero Daniel Camprubi Ferrer Alba María Antequera Pedro Laynez Roldán Elisa Riera
Instructional designer & support	Education & Training Team. Barcelona Institute for Global Health
Description:	This course covers the clinical evaluation of travelers and migrants, focusing on accurate diagnosis and the management of common diseases. It also explores treatment options based on the latest scientific updates.
Learning objective:	Implement the diagnosis and management recommendations of the main clinical presentations of migrants, refugees and returning travelers.

Evaluation:	The final grade will take into account participation in forums, completion of interactive materials, and end-of-unit assessments. It will be calculated as follows: • 15% for forum participation (with at least 3 contributions required) • 25% for completion of interactive materials (with completion of essential materials being required) • 60% for end-of-unit assessments: Written case scenarios which combine open questions and multiple choice questions to direct the practical diagnosis and management of the main clinical presentations.
Resit:	Students who do not achieve a passing grade on the end-of-course assessment will have the chance to complete an alternative activity. Resit must be completed and delivered in a maximum of two weeks (guidelines and terms will be specified by the course coordinators).
Organization of the Course GENERAL	The sessions are organized as follows: <u>Key course information and resources:</u> • Video: How to use the virtual platform • Teacher's speaker • Discussions • Schedule • Syllabus • Main resources

Organization of the Course

1.- What should be considered in the initial evaluation of returning travelers and migrants?

Specific learning objectives:

- Apply the specific recommendations in the initial approach of returning travelers and migrants, including the travel itinerary, the risk exposures assessment and the particularities of the physical examination
- Recognize the situations in which an infection by a high transmission pathogen should be suspected, based on epidemiological and clinical factors

- Clinical round#1 (recording): Travel medicine in the context of the European healthcare model
- Protocol: Initial assessment of returning traveler and migrant
- Interactive lesson: Initial assessment of returning travelers and migrants: What should be considered
- Key resource: Web resources to search outbreaks
- Interactive lesson: Suspicion of high consequence pathogen

2.- Febrile illness in returning travelers and migrants

Specific learning objectives:

- Apply the assessment recommendations in the diagnosis and therapeutic management of imported fever in returning travelers and migrants. Follow the steps of the management algorithm proposal

- Video pill: Four challenges when managing fever in returning travelers and migrants [Dr. José Muñoz]
- Protocol: Febrile illnesses returning travelers and migrants
- Video pill: The Effort study. Understanding the causes of fever in returning travelers [Dr. Daniel Camprubí Ferrer]
- Quick article review: Spanish consensus on imported febrile illness
- Interactive lesson: The basics of imported fever management
- Interactive lesson: A clinical case to learn the imported fever management
- Further cases:
 - Interactive case: Celine's case
 - Interactive case: The volunteers' case (I) - José
 - Interactive case: The volunteers' case (II) - Friends in the lake

3.- Management of malaria in non-endemic settings

Specific learning objectives:

- Apply the diagnostic and therapeutic recommendations of imported malaria in returning travelers and migrants, and recognize the current limitations and challenges

- Video pill: Introduction to imported malaria [Leire Balerdi]
- Protocol: Management of Imported malaria
- Video pill: Malaria Rapid Diagnostic Tests [Leire Balerdi]
- Clinical round#2 (recording): Are these severe malaria cases really severe?
- Interactive lesson: Management of imported malaria
- Quick article review: SEQUAMAT & AQUAMAT studies

4.- Imported arboviral infections and autochthonous transmission

Specific learning objectives:

- Identify a suspicion of imported arboviral infection according to epidemiological and clinical issues and discuss the diagnostic and therapeutic management, including new diagnostic tools
- Discuss the general features of arboviruses with capability of transmission in Europe, from endemic ones to introduced ones

- Protocol: Management of imported arboviral infections
- Interactive lesson: Dengue, Zika, and Chikungunya as the main imported arbovirosis
- Key resource: Patterson J, Sammon M, Garg M. Dengue, Zika and Chikungunya: Emerging Arboviruses in the New World. West J Emerg Med. 2016 Nov;17(6):671-679. doi: 10.5811/westjem.2016.9.30904. Epub 2016 Sep 29. PMID: 27833670; PMCID: PMC5102589.
- Interactive lesson: Cases to learn the management of imported arboviral infections
- Clinical round#3 (recording): Dengue on the move: clinical & vaccine insights

5.- Management of travel-related bacterial infections

Specific learning objectives:

- Discuss common aspects of imported Doxycycline Responding Illness and diagnostic and therapeutic management, particularly the rickettsial infections and leptospirosis

- Key resource: Main Doxycycline Responding Illnesses
- Video: Effort study. The role of DRI in returning travelers [Daniel Camprubí Ferrer]
- Interactive lesson: Imported bacterial fever: DRI's relevance
- Key resource: Basnyat B, Qamar F N, Rupali P, Ahmed T, Parry C M. Enteric fever BMJ 2021; 372 :n437 doi:10.1136/bmj.n437
- Interactive lesson: Imported bacterial fever: Enteric fever

6.- Management of traveler's diarrhea

Specific learning objectives:

- Discuss diagnostic and therapeutic management on Traveler's Diarrhea, including follow-up
- Identify and apply diagnostic and therapeutic management of enteric bacterial fever of returning travelers

- Protocol: Management of Traveler's diarrhea
- Interactive lesson: Management of traveler's diarrhea
- Further cases to check your knowledge

7.- Imported skin lesions

Specific learning objectives:

- Discuss the differential diagnosis on imported dermatological lesions
- Discuss the diagnostic and therapeutic management of the main cutaneous lesions in returning travelers

- Key resource: Differential diagnosis of imported skin lesions
- Interactive lesson: syndromic approach for imported skin lesions
- Key resource: main imported skin lesions (fact sheets)
- Clinical round#4 (recording): Skin lesions and NTDs in travelers: diagnosing through observation.
- Quiz 1: Can you identify these dermatological lesions?
- Quiz 2: Can you identify these dermatological lesions?

8.- Management of imported eosinophilia

Specific learning objectives:

- Recognize the main infectious causes of imported eosinophilia and discuss the diagnostic and therapeutic recommendations

- Video pill: What does eosinophilia mean? [Dr. Alex Almuedo]
- Protocol: Management of imported eosinophilia
- Interactive lesson: Management of imported eosinophilia
- Video pill: Challenges on the management of imported eosinophilia

9.- Imported pulmonary mycosis

Specific learning objectives:

- Recognize the main etiologies of endemic pulmonary mycoses and discuss

the diagnostic and therapeutic management, focusing on histoplasmosis

- Key resource: Histoplasmosis: diagnostic methods and clinical classification. From Azar et al (2020)
- Interactive lesson: endemic pulmonary mycoses
- Key resource: Mazi PB, et al. Management of Histoplasmosis by Infectious Disease Physicians. Open Forum Infect Dis. 2022 Jun 24;9(7):ofac313. doi: 10.1093/ofid/ofac313

10.- Imported neurological diseases

Specific learning objectives:

- Discuss the differential diagnosis of imported neurological syndromes and its clinical management, focusing in lymphocytic meningitis
- Key resource: Kenfak A, Eperon G, Schibler M, Lamothe F, Vargas MI, Stahl JP. Diagnostic approach to encephalitis and meningoencephalitis in adult returning travellers. Clin Microbiol Infect. 2019
- Interactive lesson: A general approach to imported neurological disease

11.- Management of imported liver parasites

Specific learning objectives:

- Identify the main human liver parasites and discuss the diagnostic and therapeutic recommendations of the main liver parasites Echinococcus, liver flukes and Entamoeba histolytica)
- Identify the particularities of Neglected Tropical Diseases in non-endemic countries
- Key resource: Main liver parasites
- Key resource: Echinococcosis. Treatment recommendations by stage
- Key resource: Meeting of the WHO Informal Working Group on Echinococcosis (WHO-IWGE), Geneva, Switzerland, 15–16 December 2016. Geneva, Switzerland: World Health Organization; 2017 (WHO/HTM/NTD/NZD/2017.01). Licence: CC BY-NC-SA 3.0 IGO.
- Interactive lesson: Management of imported liver parasites
- Expert video): Gray areas on the therapeutic management of echinococcosis [Dr. Leire Belardi]
- Forum discussion: Management of imported liver parasites

12.- Clinical cases in tropical medicine

Specific learning objectives:

- Discuss real clinical cases to reinforce knowledge and enhance awareness of

clinical management in tropical medicine

- Clinical round#5 (recording): Asking the expert

Additional resources:

- Evaluation of the sick returned traveler. Wu et al., 2019.
- What proportion of international travellers acquire a travel-related illness? A review of the literature. Angelo et al., 2017
- Travel-associated disease among US residents visiting US GeoSentinel clinics after return from international travel.
- Travel-Related Leptospirosis: A Series of 15 Imported Cases. Haggman et al., 2014
- Travel-related leptospirosis in Israel: a nationwide study. Van de Werve et al., 2013
- Imported Acute Histoplasmosis With Rheumatologic Manifestations in Spanish Travelers. Alonso et al., 2009
- GeoSentinel surveillance of illness in returned travelers, 2007-2011. Leder et al., 2013
- Causes of imported fever in returning travelers: a European multicenter prospective cohort study. Camprubí-Ferrer et al., 2022
- Fever in returned travellers presenting in the United Kingdom: recommendations for investigation and initial management. Johnston et al., 2009
- Etiology and outcome of fever after a stay in the tropics. Bottieau et al., 2009
- Fever in the returning traveler. Bell, 2012
- Approach to fever in the returning travelers. Thwaites et al., 2017
- Practice Guidelines for Evaluation of Fever in Returning Travelers and Migrants. D'Acremont et al., 2006
- Fever After a Stay in the Tropics. Bottieau et al., 2007
- Aetiology of fever in returning travelers and migrants: a systematic review and meta-analysis.
- Diagnostic Value of Platelet and Leukocyte Counts in the Differential Diagnosis of Fever in the Returning Traveler. Rubio, E. et al. (2019).
- Controlled human malaria infection by intramuscular and direct venous inoculation of cryopreserved Plasmodium falciparum sporozoites in malaria-naïve volunteers: effect of injection volume and dose on infectivity rates. Gómez-Pérez, G. et al. (2015). <https://doi.org/10.1186/s12936-015-0817-x>
- Camprubí-Ferrer D, Díaz Menendez M, Crespillo-Andújar C, et al. Executive Summary of the Spanish Guidelines for the Diagnosis and Management of Imported Febrile Illnesses from the Spanish Society of Tropical Medicine and International Health (SEMTSI), the Imported Pathology Group of the Spanish Society of Infectious Diseases and Clinical Microbiology (GEPI-SEIMC), the Spanish Society of Family and Community Medicine (SEMFYC), the Spanish Society of Primary Care Physicians (SEMERGEN) and the Spanish Society of Emergency Medicine (SEMES). Enferm Infecc Microbiol Clin (Engl Ed). 2024;42(7):380-385. doi:10.1016/j.eimce.2024.05.011
- Imported Malaria in Countries where Malaria Is Not Endemic: a Comparison of Semi-immune and Nonimmune Travelers. Mischlinger, J. et al. 2020 American Society for Microbiology. <https://doi.org/10.1128/CMR.00104-1.9>
- Eschar associated rickettsiosis (National Center for Emerging and Zoonotic Infectious Diseases/CDC): Fact Sheet
- Leptospirosis. Fact Sheet for Clinicians

- Lyme disease. Several resources for Healthcare providers
- A Concise Review of the Epidemiology and Diagnostics of Rickettsioses: Rickettsia and Orientia spp. Abdad MY. et al.. 2018
- TICKBORNE DISEASES OF THE UNITED STATES. A Reference Manual for Healthcare Providers. Sixth Edition. U.S. CDC (2022)
- Rickettsial Disease dDiagnostic Testing and Interpretation for Healthcare Providers (CDC): Fact Sheet
- Patterson J, et al. Dengue, Zika and Chikungunya: Emerging arboviruses in the new world. Western Journal of emergency medicine. DOI: 10.5811/westjem.2016.9.30904 (2016)
- Guzman M et al. Dengue. The Lancet. DOI: 10.1016/S0140-6736(14)60572-9 (2014)
- Zika Virus 101 - CDC.
<https://www.cdc.gov/zika/comm-resources/zika101slides.pptx>
- Chikungunya. Atypical and severe manifestations. CDC.
https://www.cdc.gov/chikungunya/pdfs/Chikungunya-atypical-severe-disease_Healthcare-provider-factsheet-10-07-2014.pdf
- Chikungunya. Clinical management in dengue endemic areas. CDC.
https://www.cdc.gov/chikungunya/pdfs/CHIKV_DengueEndemic.pdf
- Chikungunya. Atypical and severe manifestations. CDC.
https://www.cdc.gov/chikungunya/pdfs/Chikungunya-atypical-severe-disease_Healthcare-provider-factsheet-10-07-2014.pdf
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- Aronson N, et al. Diagnosis and Treatment of Leishmaniasis: Clinical Practice Guidelines by the Infectious Diseases Society of America (IDSA) and the American Society of Tropical Medicine and Hygiene (ASTMH). Clin Infect Dis. 2016 Dec 15;63(12):e202-e264. doi: 10.1093/cid/ciw670. Epub 2016 Nov 14. PMID: 27941151.
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- Kruse B, Anderson J, Simon LV. Fire Ant Bites. In: StatPearls. StatPearls Publishing, Treasure Island (FL); 2022. PMID: 29261949.
- Isbister GK, Fan HW. Spider bite. *Lancet*. 2011 Dec 10;378(9808):2039-2047. doi: 10.1016/S0140-6736(10)62230-1. Epub 2011 Jul 15
- Toxinology.com
- Fire ant stings by Australia's largest biosecurity eradication initiative
- Salas-Coronas J, et al. Diagnóstico y tratamiento de la eosinofilia importada en viajeros e inmigrantes: recomendaciones de la Sociedad Española de Medicina Tropical y Salud Internacional (SEMTSI). *Rev Esp Quimioter*. 2017 Feb;30(1):62-78. Spanish. Epub 2016 Dec 29.
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