

<b>Title</b>	Update of the Nomenclature of Laboratory Medicine Procedures for the diagnosis and monitoring of filariasis
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<b>Reference</b>	ISBN number: ISBN 978-2-11-152329-6, link to full report: <a href="https://www.has-sante.fr/portail/jcms/c_2801837/fr/actualisation-de-la-nomenclature-des-actes-de-biologie-medicale-pour-le-diagnostic-et-le-suivi-des-filarioses">https://www.has-sante.fr/portail/jcms/c_2801837/fr/actualisation-de-la-nomenclature-des-actes-de-biologie-medicale-pour-le-diagnostic-et-le-suivi-des-filarioses</a> .

### Aim

Following the request for assessment from the National Health Insurance proposing a revision of the reimbursed laboratory medicine procedures, this work was carried out to assess the laboratory medicine procedures related to the laboratory diagnosis of the most common types of tropical filariasis (loiasis, mansonellosis, lymphatic filariasis, onchocerciasis), which can be found in non-endemic areas in individuals from exposed areas (migrants, expatriates, travellers).

### Conclusions and results

The data collected in the evidence report (literature and positions of professionals) are generally consistent with the proposal from the National Health Insurance.

The first-line test, in case of clinical suspicion of filariasis associated with hypereosinophilia, in individuals from endemic areas, is direct detection of microfilariae.

This test is performed by wet mount of blood, on thin or thick blood smear or using concentration techniques (leucoconcentration, Knott's method, membrane filtration) for the diagnosis of lymphatic filariasis, loiasis and for mansonellosis caused by *M. perstans* and *M. ozzardi*.

In the diagnosis of onchocerciasis and mansonellosis caused by *M. streptocerca*, the direct microfilariae test is performed by wet mount of a skin snip; detection of microfilariae is also possible on a skin snip after staining or on histological sections.

Testing for pan-filarial antibodies may have its place, either as second-line after a negative direct microfilariae test in a patient with clinical symptoms highly suggestive of filariasis with the aim of identifying a case of filariasis, or as first-line with the aim of ruling out a diagnosis of filariasis in case of negative test results in hypereosinophilic, exposed and asymptomatic individuals.

Serological monitoring is not relevant; antibodies may persist for years after the infection is cured.

The techniques that can be used for antibody testing are precipitation techniques (electrosyneresis, co-electrosyneresis, immunoelectrophoresis), indirect immunofluorescence and the ELISA immunoenzymatic technique.

Testing for circulating antigens, by immunochromatography or ELISA, may have its place as second-line in the diagnosis of lymphatic filariasis, especially in the case of low microfilaraemia.

### Methods

The method of assessment consisted of:

- a critical analysis of the literature dealing with laboratory diagnosis of filariasis, from a systematic search followed by a selection based on explicit criteria, i.e. three best practice guidelines, 33 general journals or reference works, nine case series and two National Quality Control annals of the French National Agency for Medicines and Health Products Safety;
- collecting the reasoned position of professional organisations affected by the subject, interviewed as stakeholders, namely the National Professional Councils for Laboratory Medicine and for Infectious Diseases and the French Defence Health Service.

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