Species of filarial nematodes belonging to the genera *Dirofilaria* and *Acanthocheilonema* are recognized as common parasites of dogs throughout the world. Recently, other filarioids featured by the presence of dermal microfilariae (e.g., *Onchocerca lupi* and *Cercopithifilaria* spp.) have been recognised in Europe. In Brazil, reports of filarioids in dogs are limited to *Dirofilaria immitis*, *Acanthocheilonema reconditum* and *Cercopithifilaria bainae*. To investigate the distribution of filarial infections in dogs living in an endemic region from northeastern Brazil, blood and skin samples (n = 104) were microscopically (modified Knott’s test and skin snip sediment examination) and molecularly evaluated. Twenty-two dogs (21.15%) scored positive at microscopic and/or molecular examination for at least one filarioid, with 21 (20.19%) animals positive for blood microfilariae at molecular and/or at microscopic examination. Microfilariae of *D. immitis* were detected in 12 (11.53%) animals, with co-infection of *D. immitis* and *A. reconditum* observed in four (3.84%) individuals. One animal scored positive for *C. bainae* at both microscopic and molecular examination. Analysis of sequence obtained in the present study showed significant alignment identity with that of *C. bainae* from Europe. Considering that in the area of study arthropod vectors (mosquitoes, fleas and ticks) are prevalent throughout the year, preventive measures should be disposed in order to avoid the animal infestation and pathogen infection.

**Key words:** *Dirofilaria immitis; Cercopithifilaria bainae*; molecular examination.