

POSTER

TRICHINELLOSIS INCIDENCE IN FROSINONE PROVINCE (CENTRAL ITALY): EPIDEMIOLOGICAL SURVEILLANCE OF WILDLIFE AND PUBLIC HEALTH IMPLICATIONS

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Aim. Trichinellosis is a globally distributed food-borne zoonosis caused by nematodes of the genus *Trichinella*. Human infection occurs following the consumption of raw or undercooked meat containing viable encysted larvae. Although human trichinellosis is currently rare in Italy, the persistence of the parasite in wildlife represents a continuous public health concern. The aim of this study was to evaluate the occurrence of *Trichinella* spp. in wildlife, exactly in wild boars (*Sus scrofa*) from the province of Frosinone (Lazio area, Central Italy), and to estimate its prevalence by comparing local findings with national and international epidemiological data in order to assess public health implications.

Methods. Epidemiological data collected through the official veterinary surveillance programme between November 2020 and March 2026 were retrospectively analysed. A total of 34030 hunter-harvested wild boars (*Sus scrofa*) originating from the Lower Lazio area, specifically the province of Frosinone (Central Italy), were examined for *Trichinella* spp. in accordance with Regulation (EU) 2015/1375. A 50-g diaphragm muscle sample was collected from each carcass and analysed using the artificial digestion method in accredited laboratories. Species identification of *Trichinella* was subsequently performed by the International Trichinella Reference Centre at the Istituto Superiore di Sanità (Rome, Italy). Surveillance data were integrated with regional and national epidemiological reports, including confirmed human cases, records of *Trichinella*-positive wildlife, and documented infection foci within the province. The integrated dataset was subsequently analysed over time to assess the occurrence of human trichinellosis, the prevalence of *Trichinel-*

la infection in wild boars, the spatial distribution of positive cases, and the effectiveness of the surveillance and control measures adopted in the study area.

Results. Eleven wild boars tested positive for *Trichinella*, corresponding to an overall prevalence of 0.03%. Molecular identification confirmed *Trichinella britovi* in all positive animals, supporting its role as the predominant species circulating in the Central Apennine ecosystem. Positive cases were clustered in five distinct hunting areas located mainly in the southern mountainous sector of the province, bordering the Abruzzo, Lazio and Molise National Park. Despite the documented circulation of the parasite in wildlife, no autochthonous human cases or evidence of transmission to the domestic cycle were recorded during the study period. All infected carcasses were promptly identified through official controls and excluded from the food chain, preventing potential human exposure.

Conclusions. The results confirm the stable circulation of *T. britovi* within the sylvatic cycle in the province of Frosinone, with a prevalence comparable to that reported in other Apennine regions. The absence of human cases highlights the effectiveness of the current surveillance system, including systematic testing of hunted wild boars, official meat inspection, hunter education, and appropriate carcass management. Nevertheless, the risk of human infection persists when meat from untested animals is consumed. Continuous epidemiological surveillance and close collaboration between hunters, veterinarians, and public health authorities remain essential to prevent the spillover of *Trichinella* from wildlife to humans and to ensure food safety.