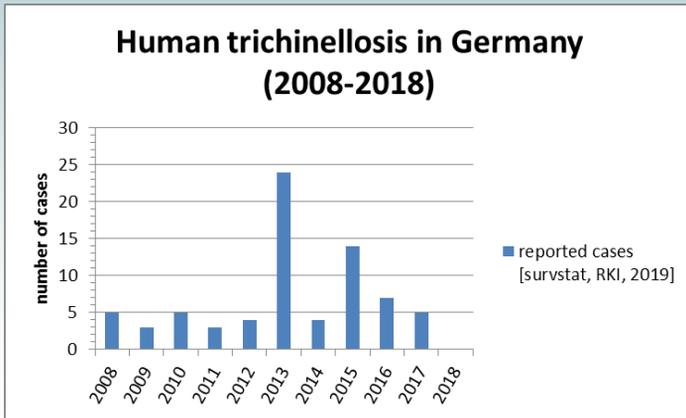


# National Reference Laboratory (NRL) for *Trichinella*, Germany: report for 2018

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Human trichinellosis occurs through the consumption of raw or inadequately processed meat or meat products containing larvae of the parasitic nematode of the genus *Trichinella*.



In Germany, trichinellosis is a reportable, yet rare disease. From 2001 to 2018, 134 cases of trichinellosis cases were reported (average: 7.4 cases/year).



Fig.1: Number of reported cases of human trichinellosis in Germany (2008-2018).

## susceptible domestic animals

- ⇒ Negligible risk of *Trichinella* infections in domestic pigs and horses. Since 2001, the prevalence in pigs is < 0.0000001% (all *T. spiralis*) and 0% in horses.
- ⇒ In 2018, one isolate was obtained from a domestic pig kept in a free-range farm.

## susceptible wild animals

- ⇒ In wild boars, the average prevalence in the past ten years was 0.003%.
- ⇒ In 2018, the NRL obtained 28 isolates from wild animals for species identification. Here, the predominant species was *T. spiralis* (20x wild boar, 3x wolf, 2x fox) followed by *T. pseudospiralis* (2x wild boar) and *T. britovi* (1x wild boar).

In 2018, two **proficiency tests** (PT1, PT2) for the detection of *Trichinella* larvae in pork samples were organised. In total, results from 119 laboratories were received and evaluated. 108 laboratories participated in PT1 and 11 laboratories in PT2, respectively. Each test panel included four samples, i.e. 0, 3, 9 and 18 larvae for PT1 and 0, 3, 7, 16 larvae for PT2.

## Results

In total, 97% (PT1) and 94% (PT2) of the positive samples, and 94% (PT1) and 100% (PT2) of the negative samples were identified correctly (Fig.2).

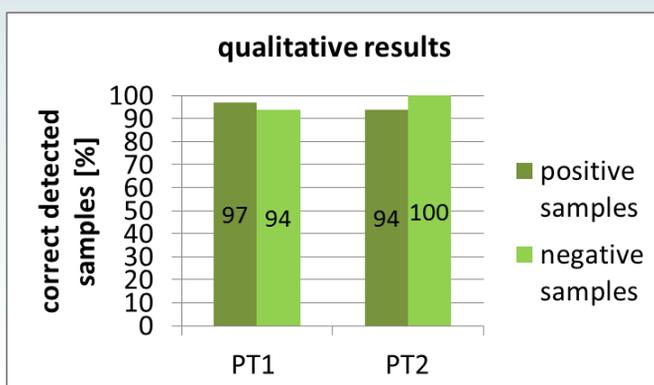


Fig.2: Qualitative results of both proficiency tests.

As in previous years, the correct quantification of larvae was more challenging for the laboratories. Of the 314 (PT1)/ 31 (PT2) tested samples, 47 (15%; PT1)/ 7 (23%; PT2) were outside the tolerance range (z-score) (Tab.1). The most frequent error was found in samples with 18 (PT1) and 16 (PT2) larvae.

quantitative results		
	number of correctly identified positive samples	number of samples outside the tolerance range (z-score)
PT1	314	47 (15%)
PT2	31	7 (23%)

Tab.1: Overview of quantitative results.