

Mapping TBE – A Literature Research of TBE in Germany

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Background: Tick-borne encephalitis (TBE) is an arboviral infection of the central nervous system and is considered as an important zoonosis in an area ranging from Europe to various parts in Asia. In Germany, between 250 and 700 human cases are reported annually. As no causative treatment exists, the most critical preventive measure is vaccination, but awareness among HCPs as well as lay population is relatively low and vaccination rates even in risk areas remain improvable.

Methods: A literature review was performed to identify locations of TBE-Virus (TBEV) natural foci, virus detection in ticks, as well as TBEV antibody detection in sentinel animals. Locations, including exact GPS coordinates where available, were mapped and overlaid with maps of TBE risk areas and areas where autochthonous human cases have occurred.

Results: Based on the literature research, separate maps for TBEV detection in ticks and seroprevalence in sentinel animals including foxes, sheep, goats, and horses revealed a concentration of potential natural TBEV foci in southern Germany but also throughout the entire country.

Conclusion: The maps demonstrate that TBEV-infected ticks and TBEV antibodies in sentinel animals are found nationwide in Germany. Hence, the risk of human TBE infection not only exists in official designated risk areas based on reported TBE incidence but throughout the country. This should be properly communicated and recommendations for vaccination should be extended accordingly.

Keywords

tick-borne encephalitis, natural foci, seroprevalence, sentinel animals, map, Germany

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Professional Status of the Speaker

Senior Scientist

Junior Scientist Status

No, I am not a Junior Scientist.

Primary author: MALERCZYK, Claudius (Pfizer Pharma GmbH)

Co-authors: Dr KELLY, Patrick (Medical Development and Scientific/Clinical Affairs, Vaccines, Pfizer Inc.); Dr PILZ, Andreas (Vaccines, Pfizer Corporation); Dr KEMMERICH, Bastian (die kommunikätöre); Mrs OHLEN, Nikola (die kommunikätöre); Prof. VON EIFF, Christof (Vaccines, Pfizer Pharma GmbH)

Presenter: MALERCZYK, Claudius (Pfizer Pharma GmbH)

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