

Current status of
West Nile Virus in
Turkey, and a
community-
based serological
survey

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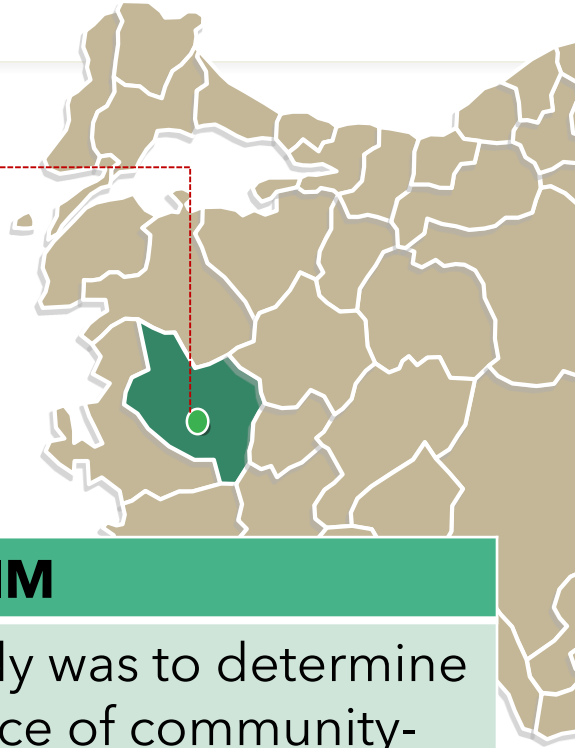
WNV seroprevalence studies in Turkey

- Seroprevalence:
 - 1964 - 1979, 4 studies with HI method
 - **1.05% - 57%**
- Blood donors:
 - 2010 and 2015, 4 studies with ELISA and PRNA methods
 - **0.56% - 2.51%**

- 2010-2011 season,
 - **52** patients from Turkey were diagnosed **with WNV infection**
 - **40** of them developed **neuroinvasive disease** and **10 died**
- These cases are more common in the western part of the country, it can show that **WNV is endemic in western Turkey** (Kalaycioglu et al).

Our study, 2020, (unpublished)

Manisa Province



AIM

The aim of this study was to determine the seroprevalence of community-based WNV in Manisa and to investigate the relationship between sociodemographic and socioeconomic variables and seroprevalence.

METHOD

Individuals older than two years of age (**N = 1,317,917**) registered in Manisa Province Family Medicine Information System

Minimum sample size was calculated as **753** when expected seroprevalence value was 2.5%
The study was conducted on **1233** people.

Selected participants were determined by simple random sampling method.

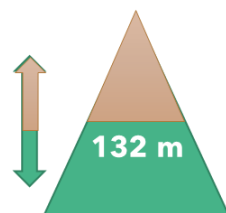
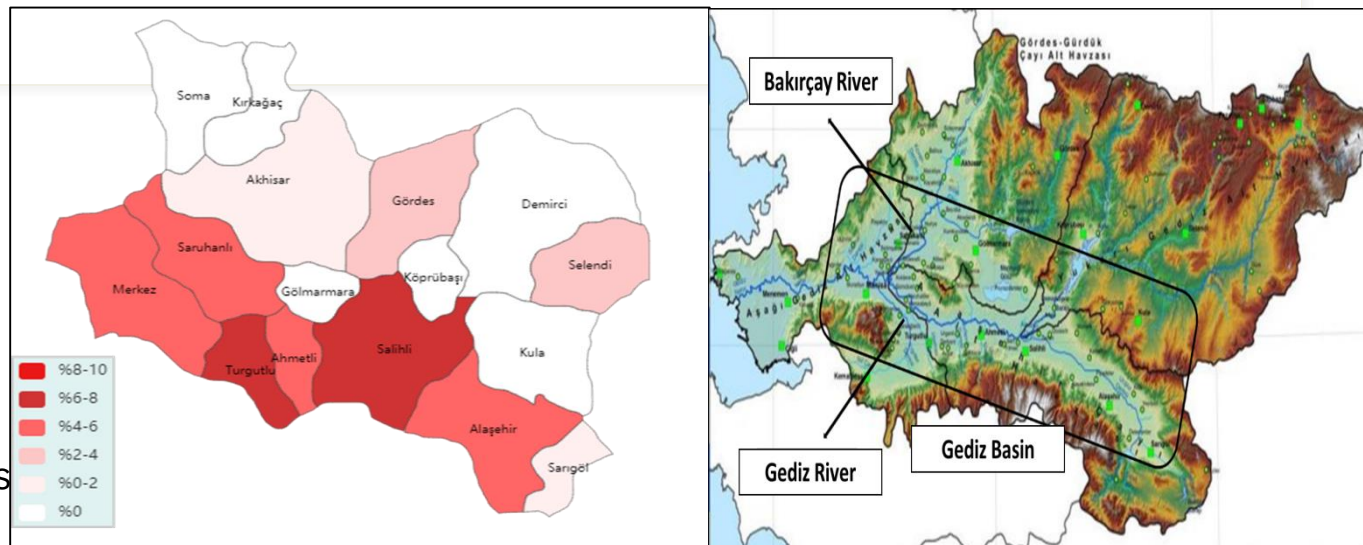
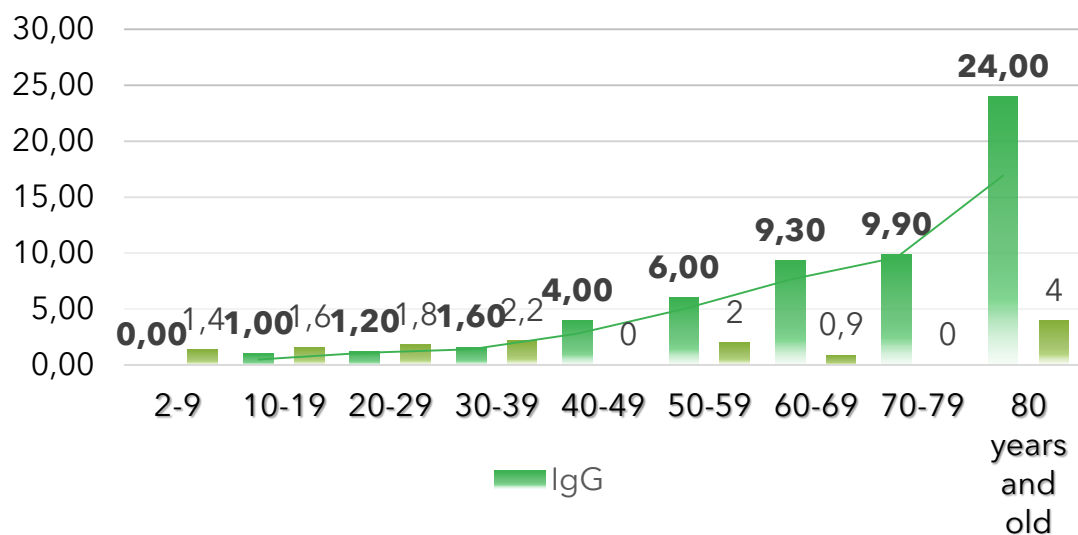
Participants were invited to Family Health Centers, questionnaires were completed and blood samples were taken

IgG and IgM antibodies to WNV by ELISA (Euroimmun)

Results

Antibody	Seroprevalence
IgM	%1.4
IgG	%3.8

Table 1. WNV IgM and IgG seroprevalence by age groups



Two groups are determined according to the median altitude (above and below 132 meters)



↑ **3265 TL** ↓

Annual equivalent income per capita is calculated according to OECD formula (Study date, 1 US\$ = 2.14 TL)

Multiple Regression Analysis

Table 1. Univariate and multivariate analysis between risk factors and WNV IgG seropositivity

Univariate a.	OR	CI	p	Multivariate a.	OR	CI	p
Age >50	5,7	3,1-10,7	<0,001	Age >50	3,5	1,6-7,5	<0,001
Altitude <132 m	2,3	1,8-6,1	<0,001	Altitude < 132 m	3,9	1,6-9,6	0,002
Low income level	1,9	1,1-3,7	0,042	Low income level	2,5	1,2-5,1	0,010
Low education status	3,8	1,7-8,5	0,001	Low education status	1,7	0,7-4,2	0,221
HT	3,4	1,8-6,2	<0,001	HT	1,0	0,2-4,9	0,992
DM	2,5	1,2-5,7	0,021	DM	1,4	0,6-3,6	0,384
CVD	3,3	1,8-6,1	<0,001	CVD	1,0	0,2-5,1	0,941

Conclusion: Advanced age, low income and living at low altitude areas have a significant effect on seropositivity.



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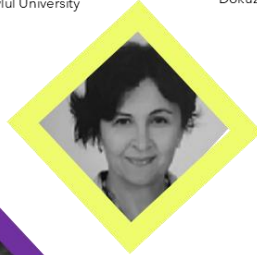
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Our Team

Thank You..