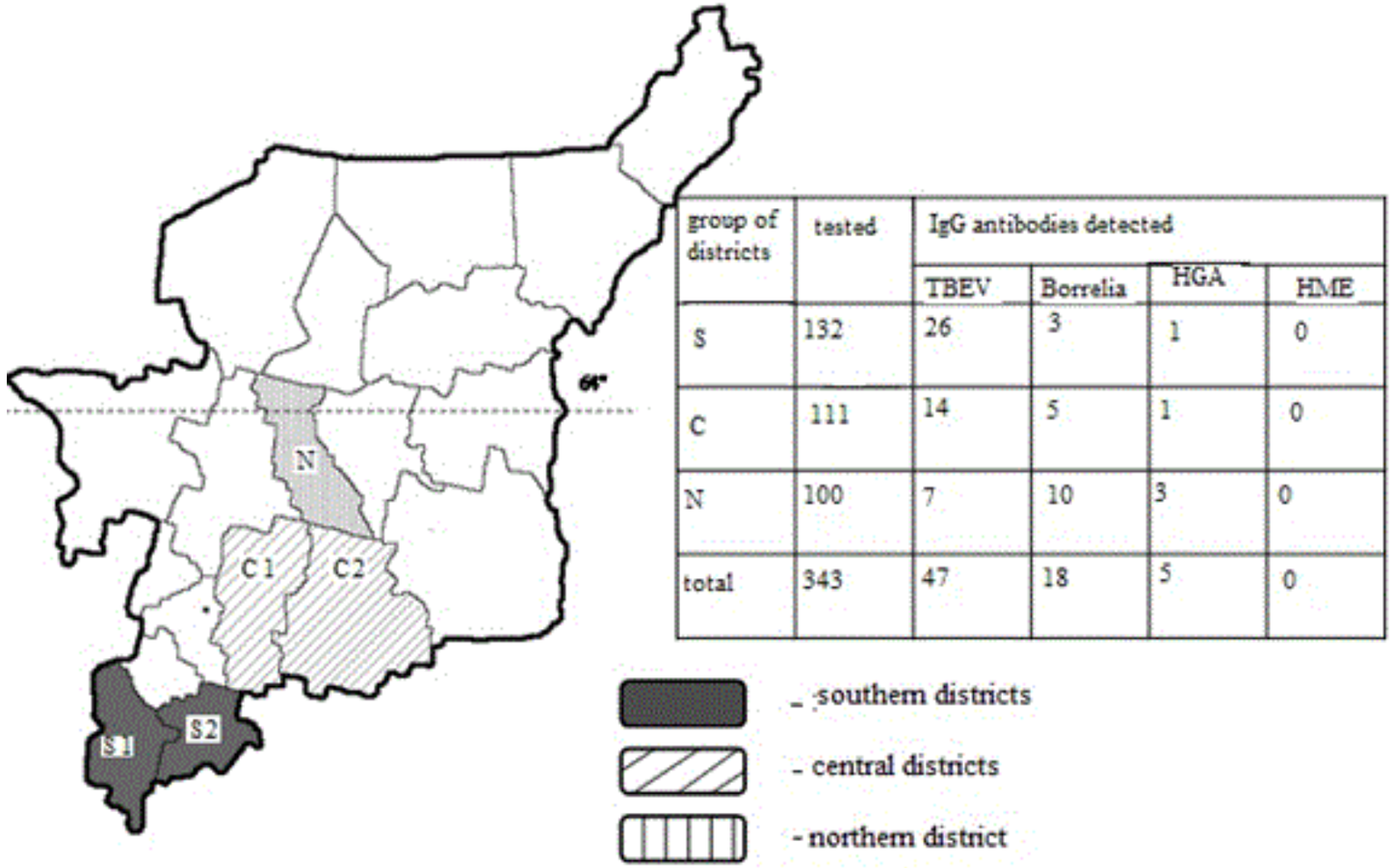
Tick-borne diseases in the European North of Russia (1)

We analyzed blood samples from healthy donors for the presence of antibodies against several tick-borne diseases.

- For the first time we detected the putative CSI human **granulocytic anaplasmosis** in Komi Republic.
- 20% of the samples tested positive for tick-borne diseases indicating a wide distribution in the region.
- We found a significant increase in **TBE** between 2001 and 2013 (see next page).



group of districts	tested	IgG antibodies detected			
		TBEV	Borrelia	HGA	HME
S	132	26	3	1	0
C	111	14	5	1	0
N	100	7	10	3	0
total	343	47	18	5	0

Figure: Map of Komi Republic with administrative division. Number and geographic distribution of blood samples from healthy donors (aged 20-70) that were positive for antibodies against tick-borne encephalitis virus (TBEV), borrelia, human granulocytic anaplasmosis (HGA) and human monocytic ehrlichiosis (HME) in 2013.

Tick-borne diseases in the European North of Russia (2)

Table: Occurrence and geographic distribution of samples positive for antibodies against TBE virus in Komi Republic in 2001 and 2013.

Districts	2001		2013		Criteria
	positive/tested	% ± m	Positive/tested	% ± m	t and p
S	10/264	3.8 ± 1.2	23/132	19.7 ± 3.5	4.3; p<0.001
S1	5/145	3.4 ± 1.5	20/102	19.6 ± 3.9	3.9; p<0.001
S2	5/119	4.2 ± 1.8	6/30	20.0 ± 4.0	3.6; p<0.001
C	8/233	3.4 ± 1.2	14/111	12.6 ± 3.1	2.8; p<0.05
C1	4/108	3.7 ± 1.8	10/81	12.3 ± 3.6	2.1; p<0.05
C2	4/125	3.2 ± 1.6	4/30	13.3 ± 3.4	2.7; p<0.05
N	3/100	3.0 ± 1.7	7/100	7.0 ± 2.6	1.3; p>0.05
Total	21/597	3.5 ± 0.75	47/343	13.7 ± 1.9	5.1; p<0.001

S-Southern districts: S1-Priluzskiy; S2-Koigorodskiy
C-Central districts: C1-Ust-Kulomskiy; C2-Kortkerosskiy
N-Northern district: Intinskiy

Our results indicate an increasing risk for **TBE** in Komi Republic, including areas, where this disease has not been recorded previously. These findings justify the need to improve the diagnostic methods for tick-borne infections, epidemiological countermeasures and education of the local population on how to avoid such infections.