

the reproductive age. Age indicators had a direct effect on the course of endometrial cancer. Aggressiveness and development of the tumor depended on the period of detection.

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## UTILIZATION OF TREC AND KREC QUANTIFICATION FOR IMMUNE DEFICIENCIES RESEARCH IN MOLDOVA

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About 0.1% of world population is expected to have different forms of primary immune deficiencies. A significant number of them remain undiagnosed, that could cause different problems such as infections from live vaccines, opportunistic infections. In some countries a neonatal qPCR screening for TREC and KREC levels in blood is done due to this reason. It allows to detect the majority of primary immune deficiencies.

**Materials and Methods:** qPCR screening of DNA of newborns, extracted from dried blood spots obtained from 75 children and selective screening of patients with suspected immune disorders were performed.

**Results.** Medium TREC (6565.2354 for 100000 cells) and KREC (8173.212 for 100000 cells) concentrations for presumably healthy newborns from Moldova were counted and they were compared with the concentrations reported by researchers in Russia (6419TREC and 1473 KREC for 100000 cells). The difference may be explained by genetic difference between the Russian and Moldovan populations and by small sample size (52 of newborns in Russia and 75 ones in Moldova. The data on frequencies of different immune defects (3.8% of lymphoproliferative disorders, 6.5% of normal indexes, 10.4% of autoimmune disorders, 7.8% of immune dysregulation disorders, 31.2% of combined immune deficiencies, 40.3% of cellular immune deficiencies) were calculated and compared. The results of introduction of this test in neonatal screening program in other countries were analyzed.

Conclusions: implementation of screening for TREC and KREC concentration in blood in perinatal screening program is expected to reduce the number of complications from primary immune deficiencies in the Republic of Moldova.

**Key words:** TREC, KREC, immune deficiency.