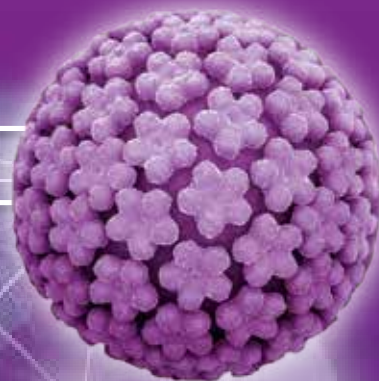




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ABSTRACT E-BOOK

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AUTHOR INDEX

Acuti, C.	664	Asensio-Puig, L.	474
Adebamowo, S.	443	Baasland, I.	635
Adejimi, A.	166	Baena, A.	453
Adsul, P.	697	Baisley, K.	743
Agudelo, M.	294	Baldaquí, A.	248
Ahmed, Y.	255	Banerjee, N.	432, 439
Aimagambetova, G.	236	Bayer, C.	761
Aiyenuro, A.	173	Bayramova, G.	612
Alamgir, A.	465	Bedard, M.	609
Alam, N.	553	Believe, O.	223, 380
Albero, G.	708	Belyakova, E.	251
Albuquerque, A.	575	Beneteau, T.	347
Aleman, L.	582	Béziat, V.	640
Alghamdi, M.	125	Boilesen, D.	477
Aljic, A.	337	Bonawitz, R.	704, 742
Allen-Leigh, B.	482	Bonjour, M.	717
Alman, E.	165	Bopp, L.	594
Al, O.	221	Borodovsky, M.	473
Alotaibi, H.	286	Brady, A.	87
Alvarez, R.	318	Brenner, N.	690
Andrews, J.	167	Brofsky, E.	566
Arbyn, M.	57, 624, 753	Broker, T.	220
Armaroli, P.	458	Brotherton, J.	370, 680
Arrossi, S.	358, 378	Brotons, M.	495

E-POSTER VIEWING TOPIC: AS03. Public Health, Epidemiology and Implementation Science / AS3.02 Epidemiology: Natural History/Risk Factors

HUMAN PAPILLOMAVIRUS INFECTION: NATION-WIDE STUDY OF HIGH-RISK TYPES' PREVALENCE AMONG KAZAKHSTANI WOMEN

G. Aimagambetova¹, T. Issa¹, A. Babi¹, S. Akhanova², N. Udalova³, S. Koktova⁴, A. Balykov⁴, Z. Sattarkyzy⁵, Z. Abakasheva⁶, S.A. Khan⁷, A. Azizan¹, C.K. Chan⁸, A. Issanov⁹

¹School of Medicine, Nazarbayev University, Department Of Biomedical Sciences, Nur-Sultan, Kazakhstan, ²Keruyen Medicus Clinic, Department Of Obstetrics And Gynecology, Almaty, Kazakhstan, ³East Kazakhstan Regional Hospital, Department Of Obstetrics And Gynecology, Oskemen, Kazakhstan, ⁴Regional Perinatal Center, Department Of Obstetrics And Gynecology, Aktobe, Kazakhstan, ⁵City Polyclinic #6, Department Of Obstetrics And Gynecology, Nur-Sultan, Kazakhstan, ⁶Daliya Clinic, Department Of Biomedical Sciences, Pavlodar, Kazakhstan, ⁷School of Medicine, University of Pittsburgh, Department Of Microbiology And Molecular Genetics, Pittsburgh, United States of America, ⁸School of Science and Technology, Wenzhou-Kean University, Department Of Biology, Wenzou, China, ⁹School of Medicine, Nazarbayev University, Department Of Medicine, Nur-Sultan, Kazakhstan

Introduction: Cervical cancer (CC) is one of the top causes of morbidity and mortality related to cancer among women worldwide. In Kazakhstan, the annual rate of CC incidence increased from 16.3±0.4 per 100,000 female population in 2009 to 19.5±0.5 in 2018 (Igissinov et al., 2021). Almost all cases of CC are related to human papillomavirus (HPV) (Bruni et al., 2019). Although CC represents a great burden to the health of women in Kazakhstan, little is known about the prevalence of high-risk HPV (HR-HPV), (Aimagambetova et al., 2020). Therefore, this study aimed to conduct a nationwide genotyping analysis of HR-HPV among women attending gynecological clinics.

Methods: Sample collection was conducted in five different regions of Kazakhstan (south, north, west, south, east, center). Patients' demographic data and cervical swab samples were collected by gynecologists from women attending gynecological clinics. In total 1645 women aged between 18 and 70 participated in the study. Genotyping of sample was performed using AmpliSens® HPV HCR genotype-titre-FRT kit on the CFX 96 Real-Time PCR machine (Bio-Rad Laboratories). Descriptive statistics was obtained using STATA 16 software (STATA Corp.LLC, 2017).

Results: In the sample population, 39% were positive for HR-HPV infection, where 26% had single HR-HPV infection and 13% had multiple HR-HPV infection. HPV-16 (54%), HPV-68 (7%), HPV-51 (7%), and HPV-18 (6%) were the most prevalence among single HR-HPV positive women. Among multiple HR-HPV infection, the most prevalent were HPV-16 (57%), HPV-68 (36%), HPV-31 (20%), HPV-51 (19%), and HPV52 (19%). There was a statistically significant difference between the age groups ($p=0.042$). HR-HPV genotypes were frequently detected in the 26-35 age group, followed by 36-45 age group.

Conclusions: This study identified high prevalence of HR-HPV infection, especially in case of multiple HR-HPV infection among Kazakhstani women. In addition, this study showed that inclusion of HR-HPV testing into CC screening program could decrease CC incidence in Kazakhstan.