BRCA1/2 mutations). Interestingly, Chechen BRCA1 c.3629_3630delAG allele was not observed among patients of Ingush ethnicity, despite these nations are believed to have common Nahk (Vainakh) roots. In Ingush patients, there were two recurrent alleles in the BRCA2 gene (c.5351dupA: 5 out of 13 BRCA1/2 mutations; L1686X: 3 out of 13 mutations). BRCA2 Q3299X mutation was repeatedly observed across several ethnic groups. OC patients from Kabardino-Balkaria had unusually high frequency of germ-line ATM truncating alleles (3/49, 6%); all 3 ATM mutations were represented by distinct ATM pathogenic variants.

Conclusion Genetic analysis of non-selected ovarian cancer patients is highly efficient in revealing ethnicity-specific BRCA1/2 mutations. Contribution of BRCA1/2 pathogenic alleles in OC and BC morbidity is high across various ethnic groups. Founder BRCA1/2 alleles are characteristic for some but not all North Caucasian nations.

CIRCULATORY HMGB-1 AS A PLAUSIBLE DIAGNOSTIC MARKER IN LIQUID BIOPSY OF CERVICAL CANCER

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Introduction/Background Cervical cancer (CaCx) is one of the common malignancies in women worldwide. Autophagy is a significant hallmark of cancer wherein high mobility group box 1 (HMGB-1) plays a crucial role. Aberrant expression of HMGB-1 is associated with tumor development, progression and poor prognosis. There are no reports available studying HMGB-1, autophagy related molecule in context to clinical significance in cancer cervix. Thus, we aim to investigate the association between HMGB-1 and its associated molecules (RAGE, p53 & p62) in CaCx. We have also evaluated the clinical significance of serum HMGB-1 in CaCx diagnosis.

Methodology 50 subjects including 20 CaCx patients, 20 healthy women and 10 controls having gynecological disorder other than malignancy were recruited. Circulatory levels of HMGB-1 were measured by ELISA. mRNA and protein levels of HMGB-1 and its associated molecules were quantitated using Q-PCR and western blotting respectively in tissues of study subjects. The data obtained were then validated in vitro by siRNA-based silencing of HMGB-1. Data was statistically analyzed and ROC curve was plotted.

Results Circulatory levels of HMGB-1 were significantly higher in patients as compared to controls. mRNA and protein expression of HMGB-1 were significantly higher in tumor tissues. The levels of RAGE, p53 and p62 were also significantly altered than their expression in controls at mRNA and protein levels. ROC curve analysis showed better sensitivity and specificity for HMGB-1 for non-invasive diagnosis of CaCx in liquid biopsy. Furthermore, siRNA-mediated targeting of HMGB-1 significantly altered expression of associated molecules, thus, validating the patients’ data.

Conclusion HMGB-1 level could be a useful marker for evaluating disease and diagnosis in non-invasive liquid biopsy. Autophagy mediated HMGB-1/RAGE pathway might play a significant role in pathogenesis of CaCx. Validation in larger patient cohort might exploit HMGB-1 as a novel non-invasive diagnostic marker for CaCx in liquid biopsy in future.

THE PROGNOSTIC VALUE OF SERUM CA125 AND HE4 IN ENDOMETRIAL CANCELS STRATIFIED BY MOLECULAR SUBGROUP

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Introduction/Background Endometrial cancer is the commonest gynaecological malignancy. Molecular classification informs