

ADAPT – genomic initiative to analyse adaptation in the group of Lithuanian Chernobyl liquidators

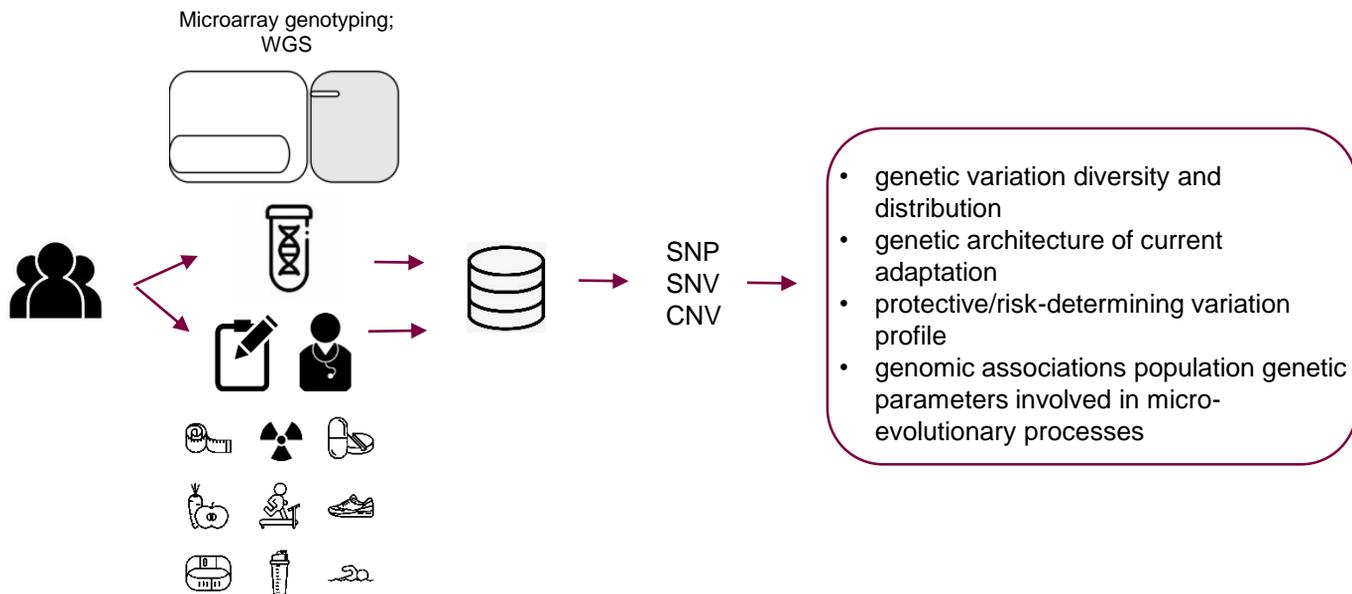
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Background. Among the remaining survivors of the Chernobyl power plant catastrophe clean-up workers from Lithuania, there are not only those who are seriously ill, but also those who are aging relatively healthy. Reaction to ionizing radiation may depend on specific individual genomic variation. Thus, we postulate that adaptation responsible for survival and longevity can be determined by the unique set of effect (protective and pathogenic) variants.

Methods. Study recruits Chernobyl nuclear power plant catastrophe clean-up workers from Lithuania, who agrees to fill in the questionnaire and donate venous blood for DNA extraction and further analysis. DNA samples undergo microarray genotyping and part of the samples will be set for whole genome sequencing (WGS).

Research Project „Adaptive genetic mechanisms – a comprehensive study of whole genome variation in the group of the Lithuanian Chernobyl catastrophe liquidators (ADAPT)“ aims to characterize whole genome variation of Chernobyl catastrophe liquidators in the context of adaptive genetic mechanisms



Results and Conclusions. We have already biobanked 116 DNA samples, consolidated questionnaire and clinical data in the database and started data generation process using microarray genotyping and whole genome sequencing.

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The study was approved by the Vilnius Regional Biomedical Research Ethics Committee (permission No. 2019/4-1119-612), Lithuania. The study meets all the ethical requirements, and the informed written consent of all study participants is mandatory.

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