

Radiogenomics

The term radiogenomics is used in two contexts: either to refer to the study of genetic variation associated with response to [radiation \(radiation genomics\)](#) or to refer to the correlation between cancer imaging features and [gene expression \(imaging genomics\)](#).

A [pilot study](#) aimed at exploratory radiogenomic [data analysis](#) in patients with NF2-associated [schwannomatosis](#) (formerly [neurofibromatosis type 2](#)) to assess the potential of image [biomarkers](#) in this pathology. Fifty-three unrelated patients (37 (69.8%) women, avg. age 30.2 ± 11.2 y.o.) were enrolled in the study. First-order, gray-level co-occurrence matrix (GLCM), gray-level run length matrix (GLRLM), and geometry-based statistics were calculated (3718 features per region of interest). Danilov et al. demonstrated imaging patterns and statistically significant differences in radiomic features potentially related to the genotype and clinical phenotype of the disease. However, the clinical utility of these patterns should be further evaluated. The study was supported by the Russian Science Foundation grant 21-15-00262 ¹⁾

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Danilov G, Makashova E, Galkin M, Karandasheva K. Radiogenomics in NF2-Associated Schwannomatosis (Neurofibromatosis Type II): Exploratory Data Analysis. *Stud Health Technol Inform.* 2023 Jun 29;305:588-591. doi: 10.3233/SHTI230565. PMID: 37387099.

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