Diacylglycerol kinase alpha (DGKA) as a novel epigenetic marker for developing fibrosis after radiotherapy (P-1182)

Key facts

- A frequent side effect of radiotherapy is that cancer patients develop fibrosis
- Fibrosis can be estimated by determination of the methylation status
- Fibrosis risk after radiation therapy is predicted by analyzing intragenic methylation sites of the DKGA gene

Abstract

Radiation-induced fibrosis is a common severe side effect of radiation therapy. No reliable marker currently exists for the prediction of radiation-induced fibrosis. Therefore, the present invention reveals a method for estimating the risk of developing radiation-induced fibrosis for use in therapy planning.

Development Stage

The results were established using an *in vitro* method, and the statistical analysis is based on a cohort of 40 patients.

The Technology

The risk of developing radiation-induced fibrosis can be estimated by determining the methylation status of several GpC sites in an intragenic region of the DGKA gene. We were able to determine a very high overall prediction accuracy (area under the ROC curve) of 0.77.

Applications and Commercial Opportunity

DKFZ is looking for a commercial partner to further validate and commercialize the test.

Inventors

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All inventors are employed either by DKFZ or University of Heidelberg.

Intellectual Property

A European Patent application has been filed. EP 14002963, priority date: 27.08.2014

Further Information

No other public information is currently available, but further information (speaking with the inventors) is available under a signed Confidential Disclosure Agreement (CDA).

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