

genetic tests in preventive medicine

deCODEhealth | using genetic information in healthcare



deCODEhealth facilitates the usage of genetic risk tests for common diseases as a tool for preventive medicine in clinical practice.

In recent years, genome-wide association studies have established a large number of robust associations between specific genetic markers and complex human diseases such as breast cancer, prostate cancer, heart attack, stroke, and type 2 diabetes, to name a few examples. Many of these recently discovered variants are already finding their way into genetic tests that estimate an individual's predisposition to the corresponding diseases.

The nature of these new risk tests is quite different from the more traditional Mendelian genetic tests for the much less common and highly familial diseases, such as cystic fibrosis and Huntington's disease. They have probabilistic outcomes and are generally independent of family history as compared to the highly penetrant variants that cause predictable family inheritance patterns and more deterministic outcome. Although the impact on individuals is often very high for the traditional tests, they typically affect only a small fraction of the population whereas the tests for the common diseases may eventually have larger public health impact, even though their impact on the individuals is less.

Many of these new genetic tests confer a risk that is similar or greater than commonly used medical risk tests such as LDL-cholesterol or PSA. Because this common genetic risk is generally independent of conventional risk factors, including family history, a significant number of individuals considered at average risk may be reclassified as having higher risk, perhaps prompting prevention or early detection strategies.

Benefits of deCODEhealth

- Get an overview of patients who have ordered deCODEme genetic scans or diagnostic tests for individual diseases, monitor order status and access results on-line.
- Easily sort and review patient results based on condition name, relative genetic risk, or increased life-time risk.
- PDF reports to download, print, or view for selected diseases, including physician version and patient handout.
- Add comments to patient results that appear on the PDF reports and in your patient's deCODEme account.
- Allows patients to give invaluable feedback to validate and improve future genetic risk modeling.
- Get automatic notifications when genetic risk models are updated and new disease results come in - easily find patients whose risk may be affected.
- Physicians can choose to be accessible to deCODEme customers in the on-line physician registry to consult or process orders for patients.



deCODEhealth is a new solution that combines state-of-the-art information technology with personalized genetics to facilitate modern preventive medicine.

On-line delivery of results

Disease risk test results from deCODE have in the past been delivered by mail or by fax. With deCODEhealth, registered physicians can now access their patient's test reports on-line. deCODEme was initially setup as a direct-to-consumer (DTC) service. It is clear however that many people prefer to receive advice regarding their genetic risk results, and what to do about them, from a trained health care professional. Likewise, legislation in several states and countries does not permit direct-to-consumer diagnostic tests. In order to meet these requirements, deCODEhealth was designed to allow deCODEme genetic scan results to be reviewed by physicians on-line.

Register yourself and your practice

Physicians who register in deCODEhealth are associated with a medical institute or a clinic. deCODE clears the first registration for each practice. Thereafter, it is easy for physicians to accept and activate colleagues from their practice into the registry.

Simplify patient consultation

Patients who order deCODEme scans while visiting the physician are automatically associated with the physician's account. Thus, deCODEhealth provides a kiosk-like setup for deCODEme. The physician registry also provides the option to make the participating physicians visible in the on-line search listing in deCODEme. This allows deCODEme customers to share their results with a physician of their choice. Either way, physicians can provide deCODEme customers with consultation and release their results for on-line access where state restrictions prohibit DTC service. The patients may have to pay a visit or the consultations can take place through phone calls.

Patient feedback for improved risk modeling

deCODEme users can provide feedback on their disease status and history. The user can enter his information allowing the physician to quickly review the patient's answers, edit them or suggest changes. This data collection can augment and refine the risk calculations by adding conventional risk factors which improve the accuracy of the overall risk assessment. For example, information on vital signs and family history may be used to model additional risk factors, such as in the Framingham score or the Gail model. Future versions of deCODE health will integrate this type of information with genetic risk scores.

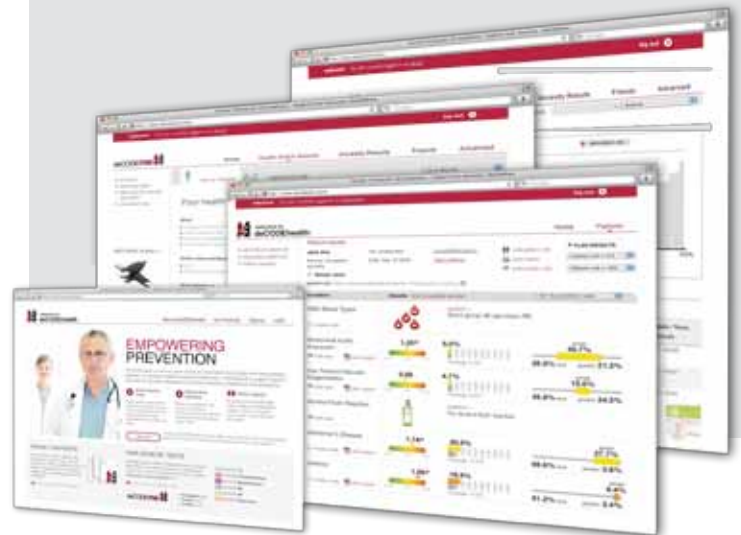


"We need to empower people, if a genetic test prompts patients to do what is right for them then we have accomplished our goal"

Robert Superko M.D. Executive Director, Center for Genomics and Human Health
Saint Joseph's Translational Research Institute

A world leader in gene discovery & genetic testing

deCODE genetics, a world leader in gene discovery of common diseases for many years, has been offering genetic risk tests through physicians for several years. In November 2007, deCODEme was launched, the world's first personal genomics service. It allows individuals to access the service on-line and submit a simple inner cheek swab sample for DNA based analysis of multiple common diseases.



Simple workflows for better patient care

deCODEhealth provides simple workflows that allow physicians and their medical assistants to keep track of their patients. Orders recently completed are automatically listed, such that the corresponding patients can be scheduled for a follow-up appointment or phone call, either by the physician or his assistant. Future versions will provide integration with mainstream calendar systems such as Google Calendar or Windows Live Calendar. Furthermore, integration with EMR systems is envisioned in the near future, e.g. through standards such as HL7 and the continuity of care record (CCR). This will allow seamless transfer of patient risk profiles into electronic medical records.

To register with deCODEhealth go to:

www.decodehealth.com/signup

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