Genomic medicinean updated primer article review examples

Science, Genetics



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With the growing speed and complexity of technology, the field of medicine is continually changing. The field of genetics, for example, is becoming increasingly important to both prevention and treatment of diseases. The article, "Genomic Medicine — An Updated Primer" by Feero and Guttmacher, offers an update on the field of genomewide scans, or a test that provides a measurement of up to millions of types of disparate genes within an individual's genetic structure. These scans are used by researchers to learn more about human variability and similarities or by clinicians for treatment purposes. The authors see the growth of genomic medicine as very beneficial, since it will allow for greater personalization in healthcare. Providers will be able to use genomescans to better know the healthcare risks that people have and what preventative measures can be taken for treatment or elimination before they occur.

The article presents the case study of a woman named Cathy, who is 40 years old and has three children. During her yearly physical at the doctor's office, she asks for a genomewide scan. She wants this scan done in order to know the risks she or her family may have for prevalent illnesses. The scan shows that Cathy has a somewhat higher risk of breast cancer. When looking at her family history, the physician sees that her Ashkenazi Jewish ancestry

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includes several relations who had breast cancer. This makes her even more at risk for both cancer of the breasts and ovaries. Given the results of both the genomescan and the information from the family history, the doctor recommends having her DNA tested for genes that are associated with inherited cancers of the breasts and ovaries. She also has a mammography of her breasts. The genetic tests prove to be negative, but the mammography shows a lump. When she has a biopsy, breast cancer is found. The surgery of the lump removal is successful and Cathy has chemotherapy as a follow up.

Although genomic testing is still very new in the field of medicine, it is expected that in the near future it will provide a great deal of important information to researchers and clinicians. Of course, this field of study also comes with its warnings, such as deciding how to use the information that is found. For example, if Cathy found out earlier that she was prone toward these cancers, would she have had her children? Is she going to tell her children that they may be inheriting this disease? Should they be tested?

I would recommend this article to others, since it is surely one of the areas that will be increasingly important in the future of medicine. Although I am going to be a medical transcriptionist and not a clinician, this article is of interest to me because it shows how quickly the field of medicine is changing and some of the ethical considerations that must be faced. Also, as more genomewide scans are done, there will be more information learned and more consistency in medical reporting—my area of interest.