The near-complete DNA sequencing of the human genome, first published in February 2001,1,2 swiftly grabbed the attention of the scientific community and served as a catalyst to awaken a general interest in molecular medicine among primary care physicians. If the patient is to be the ultimate beneficiary of such scientific advances, the information needs to be accompanied by physician education and clarification of its relevance to clinical practice. This particular need, as it applies to the recent progress in medical genomics, was recognized early by the Mayo Clinic Proceedings editorial board and resulted in the launching of a Primer on Medical Genomics educational series in August 2002.3-5 Between then and now, various aspects of genomic medicine, including fundamentals of molecular biology,6 medical genetics,6,7 laboratory cytogenetics,8 DNA microarrays,9,10 proteomics,11 bioinformatics,12 pharmacogenetics,13 gene therapy,14 genomic ethics,15 and systems biology,16 were presented in a clinician-friendly, yet comprehensive fashion. The primary objective of this multiauthored endeavor, organized and sponsored by the Mayo Clinic Genomics Education Steering Committee, has been to facilitate physician education and information in the new genomics era. The current issue of the Mayo Clinic Proceedings contains the 13th (genomics ethics) and 14th (systems biology) articles in the aforementioned educational series and marks the end of the beginning in the overall strategy of the journal to incorporate new biology in its content. The Primer on Medical Genomics series will be collated in a book format and will be available for purchase from the editorial office of Mayo Clinics Proceedings.

No one doubts the monumental impact on human health and disease from both the genome project and the unprecedented advances in biotechnology. At the same time, however, it will be some time before human disease in a given patient is sequentially forecasted, prevented, and treated according to genomic profiles. Similarly, clinicians often ask how the current hype in genomics-genetics relates to their day-to-day clinical practice. It is under this premise that the editorial staff of Mayo Clinic Proceedings is pleased to announce the continuation of the Medical Genomics series in the journal with a new and more practical symposium entitled Genetic Test Indications and Interpretations. The new series is scheduled to start in January 2005 and will have a specific disease-oriented approach that demonstrates the transition of technology to clinical utility. Frequent disorders, including hemochromatosis, cardiovascular disease, specific cancer entities, neurodegenerative disease, thrombophilia, and psychiatric illness, will be addressed from the standpoint of genetic test indication and interpretation as well as issues of genetic counseling.

Clinicians cannot afford to ignore the fast-paced progress in genomics research because it will profoundly affect clinical practice. At the same time, scientists need the partnership with clinicians to identify, prioritize, and put into context the key study questions and thus minimize the possibility of costly misadventures, confusion, social outcry, and disarray (no pun intended). The challenge for all of us is to become well-informed passengers on the genomics bandwagon and avoid the temptation to make premature conclusions. As articulated eloquently in a recent commentary, the enthusiasm to promote technology in science is to complement, not undermine, the irreplaceable value of clinical insights.17 Accordingly, we hope that our planned project will address the pressing need for responsible and wise use of genetic testing and information in routine clinical practice.

REFERENCES


