Graduate Medical Education in Medical Genetics
It’s Monday morning in your medical practice. You just got a consult from your neonatal intensive care unit to evaluate a baby born last night with multiple congenital anomalies. Your clinic today includes consultations for a child with PKU, a 38-year old mother with a history of stillbirths, and a 40-year old man with colon cancer. Tomorrow you will be part of the patient care team in the craniofacial clinic. What medical specialty gives you this type of diversity and challenge in your clinical practice? Think Medical Genetics.
How Are Medical Geneticists Trained?

Clinical genetics training is acquired through accredited residency programs in medical genetics. Some medical geneticists also complete training in combined residency programs, such as a combined pediatrics/medical genetics residency program or an internal medicine/medical genetics residency program. Clinical genetics subspecialty training in medical biochemical genetics is available with an additional year of training. Specialty laboratory training in clinical molecular genetics, clinical cytogenetics, and clinical biochemical genetics is also available through laboratory-based fellowship programs. In addition, those who have completed a residency in medical genetics or pathology are eligible for a one-year fellowship in molecular genetic pathology, which focuses on the laboratory diagnosis of diseases with molecular changes. Programs offering medical genetics residencies participate in the ERAS/NRMP.

What Does A Medical Genetics Residency Include?

Medical genetics is a primary specialty and not a subspecialty of another field. Residencies in medical genetics are two-year programs that carry a prerequisite of at least two years of initial residency training in some other Accreditation Council for Graduate Medical Education specialty such as obstetrics and gynecology, pediatrics, or internal medicine. Clinical responsibilities of medical genetics residents include providing patient care in dysmorphology and pediatric metabolic clinics, prenatal diagnosis clinics, and adult genetic disease clinics/genomics, such as cancer genetics. Medical genetics residents also participate in graduate level courses in basic genetics, and human and medical genetics, and they complete rotations in molecular genetics, cytogenetics and biochemical/metabolic genetics laboratories. Some institutions include a third year of research as part of their training program.

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- Diagnose, manage and treat patients with genetically-influenced health problems
- Elicit and evaluate individual and family medical histories
- Perform genetic and genomic risk assessments
- Conduct genetic and genomic tests
- Interpret clinical and laboratory information
- Provide patient and family counseling
- Explain the causes and natural history of genetic and genomic disorders
- Use current knowledge of genetics and genomics in patient care decision making
- Interact with other healthcare professionals in the provision of services for patients and families with genetically-influenced disorders

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basic pediatric, maternal-fetal medicine, or internal medicine residency training with medical genetics training. Trainees completing combined programs are eligible for certification in both specialties.

**Board Certification**
Upon completion of a residency in medical genetics, trainees are eligible for board certification in Clinical Genetics by the American Board of Medical Genetics (ABMG), which is one of the 24 member boards of the American Board of Medical Specialties.

**Where Do Medical Geneticists Work?**
Many medical geneticists work in academic settings and are actively involved in teaching as well as the diagnosis, treatment, management, and research of genetically influenced disorders. With the growing recognition of the importance of genetics in disease, medical geneticists are increasingly affiliated with managed care programs; others work in private practice, industry or healthcare policy. It is the medical geneticists who are expected to lead the integration of new genetics skills and knowledge into healthcare.

**Is Medical Genetics The Right Specialty For You?**
If you like the uniqueness of specialty knowledge, but long to apply your knowledge across broad areas of medical practice with unprecedented scientific advances, medical genetics could be the specialty for you. Likewise, if you would like to be on the front edge of a growing new specialty with a rapidly expanding scientific base and great career flexibility, think Medical Genetics. Medical genetics is a rewarding specialty for smart, inquisitive, patient care centered physicians who are ready to meet the challenges of medicine in the 21st Century!

**Where Can You Go For More Information?**
More than 50 training programs around the United States offer residencies or fellowships in medical genetics. For more information log on to:

- The Accreditation Council for Graduate Medical Education
  www.acgme.org/acWebsite/navPages/nav_130.asp
- The American Board of Medical Genetics
  www.abmg.org
- The American College of Medical Genetics
  www.acmg.net
- The American Society of Human Genetics
  www.ashg.org
The American College of Medical Genetics Foundation (ACMG Foundation) is the supporting educational foundation of the American College of Medical Genetics (ACMG). The ACMG Foundation enables ACMG to provide education, resources and a voice for more than 1400 biochemical, clinical, cytogenetic, medical and molecular geneticists, genetic counselors and other healthcare professionals committed to the practice of medical genetics.

The American College of Medical Genetics (ACMG) is the only nationally recognized medical organization dedicated to improving health through the practice of medical genetics and genomics. The College’s mission includes four major goals: 1) to define and promote excellence in medical genetics practice and to facilitate the integration of new research discoveries into medical practice; 2) to provide medical genetics education to fellow professionals, other healthcare providers, and the public; 3) to improve access to medical genetic services and to promote the integration of genetics into all of medicine; and 4) to serve as advocates for providers of medical genetic services and their patients.

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