Hospital for Special Surgery (HSS) is the world's largest specialty hospital for orthopedics and rheumatology, an academic research center devoted exclusively to musculoskeletal medicine. HSS was also ranked the number one hospital in the nation for orthopedics in *U.S. News & World Report* "America's Best Hospitals" list.

### Limb Lengthening and Complex Reconstruction Service

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#### Visit us on the Web:
To make an appointment, or to learn more about Limb Lengthening and Complex Reconstruction, visit:
http://www.hss.edu/limblengthening.asp or www.limblengthening.com

Preparation Future Leaders in Limb Lengthening

Hospital for Special Surgery is internationally recognized as a leader in the education of medical specialists. In the area of limb lengthening and complex reconstruction, young clinicians are receiving training to advance the field both nationally and internationally. In addition, HSS experts are sharing their expertise through published articles in peer-reviewed journals, professional development courses and lectures in the U.S. and abroad.

“The program that we have developed at the Limb Lengthening and Complex Reconstruction Service has made this seemingly complicated procedure routine and safe.”

— Austin T. Fragomen, MD

Hospital for Special Surgery is an affiliate of NewYork-Presbyterian Healthcare System and Weill Cornell Medical College.
Limb lengthening and complex reconstruction techniques are used to repair limb deformities, replace missing bone and lengthen and/or straighten bone segments of legs and arms in adults and children. The Limb Lengthening and Complex Reconstruction Service at Hospital for Special Surgery (HSS) is internationally recognized as among the most comprehensive limb lengthening programs today and the first of its kind at a major U.S. academic center. Experts within the Service join forces with HSS dedicated health professionals and researchers to ensure the most effective and optimal care. An ongoing focus of the Service is to further develop and improve upon traditional approaches and techniques that incorporate new surgical options and enhanced devices and procedures.

Improving Patient Care
Physicians and scientists work side-by-side to integrate research findings and collaborate with other HSS specialists in areas of pain management, radiology, biomechanical engineering, basic research and other orthopedic sub-specialties. The goal is to treat and provide the best care available for:

- Post Traumatic Injuries and Bone Healing Problems
- Congenital Limb Conditions
- Bone Growth Disturbance from Trauma or Infection
- Bone Defects and Deformities of the Femur, Knee, Tibia, Ankle, Foot and Upper Limb
- Joint Preservation for Arthritis with Realignment and Distraction

Understanding Limb Lengthening
Limb lengthening is an advanced surgical technique that taps into the body's own capacity to regenerate bone and tissue following fractures. It has been performed in Russia for more than 50 years and was further developed and improved upon more recently in the U.S. and abroad. Limb lengthening involves cutting a bone into two segments and then gradually moving the bone ends apart to allow new bone to form in the gap. The procedure is used for:

- Bone Healing for Non-Healing Fractures (Non-Unions)
- Bone Lengthening
- Limb Salvage after Severe Trauma and/or Infection

Transforming Treatments
HSS clinicians and scientists are studying all aspects of limb lengthening to understand its underlying mechanisms and translate this knowledge into improved patient care and new approaches for:

- Using Stem Cells to Enhance Bone Healing and Cartilage Regeneration
- Computer-Assisted Limb Realignment
- Incorporating Biomechanical Gait Analysis Studies
- Improving Tools for Limb Lengthening
- Evaluating Limb Lengthening and Bone Healing with Computer-Assisted X-Ray Systems (PACS)

"With these procedures, we provide opportunities for individuals who previously had no treatment alternatives."

— S. Robert Rozbruch, MD

Dr. S. Robert Rozbruch is Chief of the Limb Lengthening and Complex Reconstruction Service at HSS and one of the leading experts on limb lengthening. He graduated Magna Cum Laude from the University of Pennsylvania, and then Weill Cornell Medical College with honors in research. His residency in orthopaedic surgery at HSS was followed by two Fellowships including specialized training in trauma as an AO Fellow at the University of Bern, Switzerland and then in adult and pediatric limb lengthening at the Maryland Center for Limb Lengthening & Reconstruction. Considered a leading expert in this specialty, he is editor of “Limb Lengthening and Reconstructive Surgery,” an authoritative textbook in the field. He has presented his clinical work and research at national medical meetings and is the author of numerous articles in his field. Since 2006, he has been named one of the “Best Doctors in New York” by New York magazine.

Dr. Austin T. Fragomen is one of a handful of national experts in limb lengthening and reconstruction surgery. His work with Dr. Rozbruch has helped to build the Limb Lengthening and Complex Reconstruction Service at HSS, where he serves as Fellowship Director, Director of Education, and Director of the Limb Lengthening and Complex Reconstruction Clinic. He is dedicated to clinical and biomechanical research and has presented his work at medical meetings and lectured extensively on related topics. He has also authored and edited articles for various orthopaedic journals and textbooks. He was recently featured in the “Best Doctors in New York” issue of New York magazine.