Tailoring CT Protocol to Patient Age and Size with a Focus on Pediatric Patients

Introduction
Speakers

- **Introduction**
  - Donovan M. Bakalyar, PhD

- **CT Protocol Optimization Over the Range of Patient Age & Size and for Different CT Scanner Types**
  - Frank N. Ranallo, PhD

- **Practical Considerations for Size Based Protocol Optimization**
  - Zhihua Qi, PhD

- **Meeting the Imaging Needs of the Pediatric Radiologist: The Effect of Patient Size, Age and Clinical Circumstance on Optimizing the CT Image**
  - Kimberly E. Applegate, MD
Pediatrics: Is a child a small adult?
Child and adult: Which is which?
Magnification, FOV and noise: What needs to happen here?
Scaling dose to size
Based on size alone...

- for the same apparent noise, the dose to the detector must *increase* as the patient size *decreases*.
- for a smaller patient, due to less attenuation *less* patient dose is required to achieve the *same* dose to the detector
- These effects counter each other resulting in the recommendation of equating SSDE for patients of different size*.

Thank you