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## Advanced Pediatric Chest Computed Tomography : Safe and standardized protocols and sensitive image analysis of cystic fibrosis lung disease

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## **Advanced Pediatric Chest Computed Tomography**

1. Lifetime mortality risk related to biennial usage of chest CT from birth into adolescence is estimated to be below 0.1% in children with CF, which is lower than the mortality risk from a medical error per hospitalization. (This thesis)
2. Large variation in image noise seen among CT scanners of multiple CF centers can be avoided by standardizing both spatial resolution and radiation dose. (This thesis)
3. Higher airway to artery ratios of small airways relative to large airways and higher number of visible small airways on chest CT of children with CF underline the importance of the small airways in the pathophysiology of CF lung disease. (This thesis)
4. Patients with CF have reduced intra-, and interbranch tapering across both the central and peripheral airways. (This thesis)
5. The dimensions of the central airways and intrathoracic tracheal length increase with age and are higher in males compared to females after the age of 14 years. (This thesis)
6. Measure what is measurable, and make measurable what is not so. (Galileo Galilei)
7. A prevalent assumption about automation is that it resides in tyrannical machines that replace humans. However, it has become evident that automation does not supplant human activity; rather, it changes the nature of the work that humans do, often in ways unintended and unanticipated by the designers of automation. (Human Factors and Ergonomics Society. 1997; 39(2): 230-253)
8. Proficiency at promoting mindfulness will never be evaluated on the objective structured clinical examination, but should be part of a doctor's clinical toolkit. (New England Journal of Medicine. 2015;372(10), 901-903)
9. Intelligence is the ability to adapt to change. (Stephen Hawking)
10. Animals represent a source of physical contact and consolidation, reduce loneliness and depression, and promote healthy life styles, all of which are capabilities that can improve their owners' health. (Psychiatria Danubina. 2009;21(2):236-241)
11. If you think you are too small to make a difference, try sleeping with a mosquito. (Dalai Lama)