Making Progress Towards a COPD and Lung Nodule Protocol

George Washko MD
Division of Pulmonary and Critical Care Medicine
Brigham and Women’s Hospital
Disclosures

- **Consultancies**: GlaxoSmithKline, Boehringer Ingelheim, Genentech, PulmonX, CSL Behring, Vertex, Novartis
- **Quantitative Imaging Solutions**: Consulting group and software development for data management
- **Grants**: NIH, DoD, Boehringer Ingelheim (characterization of parenchymal disease in smokers)
- **Spouse**: Works for Biogen
Why make progress?

• Is there clinically actionable data in the image outside of a lung nodule?

• Does a more precise assessment of those extranodular features improve care?

• Why isn’t this already done?
Upper Lobe Predominant Emphysema
Parenchymal Disease (continuous measures)

• Emphysema progression
  • Enable clinical trials
  • Measure of disease activity
  • Response to therapeutic intervention
  • May have some bearing on cancer risk

– Limitations:
  • No therapy to offer for progressive emphysema

• Aspirational
Parenchymal Disease (continuous measures)

• Interstitial Lung Abnormalities (ILA)
  – Biologically distinct but clinically relevant
    • 6-8% of people over the age of 50
    • Early fibrotic lung disease (subset)
    • Progressive (subset)
  – Target for therapeutic intervention
    – Nintedanib/pirfenidone

• Actionable

NEJM 2011
Summary

• There is clinically useful data in the lung cancer screening CT
• Heterogenous protocols are OK for emphysema detection (binary)
• Common lung and nodule protocol will enable emphysema treatment (aspirational)
• Common protocol will enable ILA treatment (leveraged now)