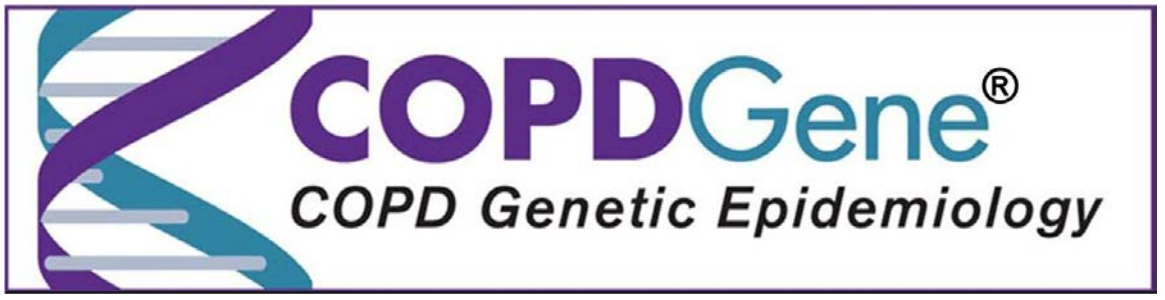


Cohort Characteristics Lung Cancer Prevalence/Incidence

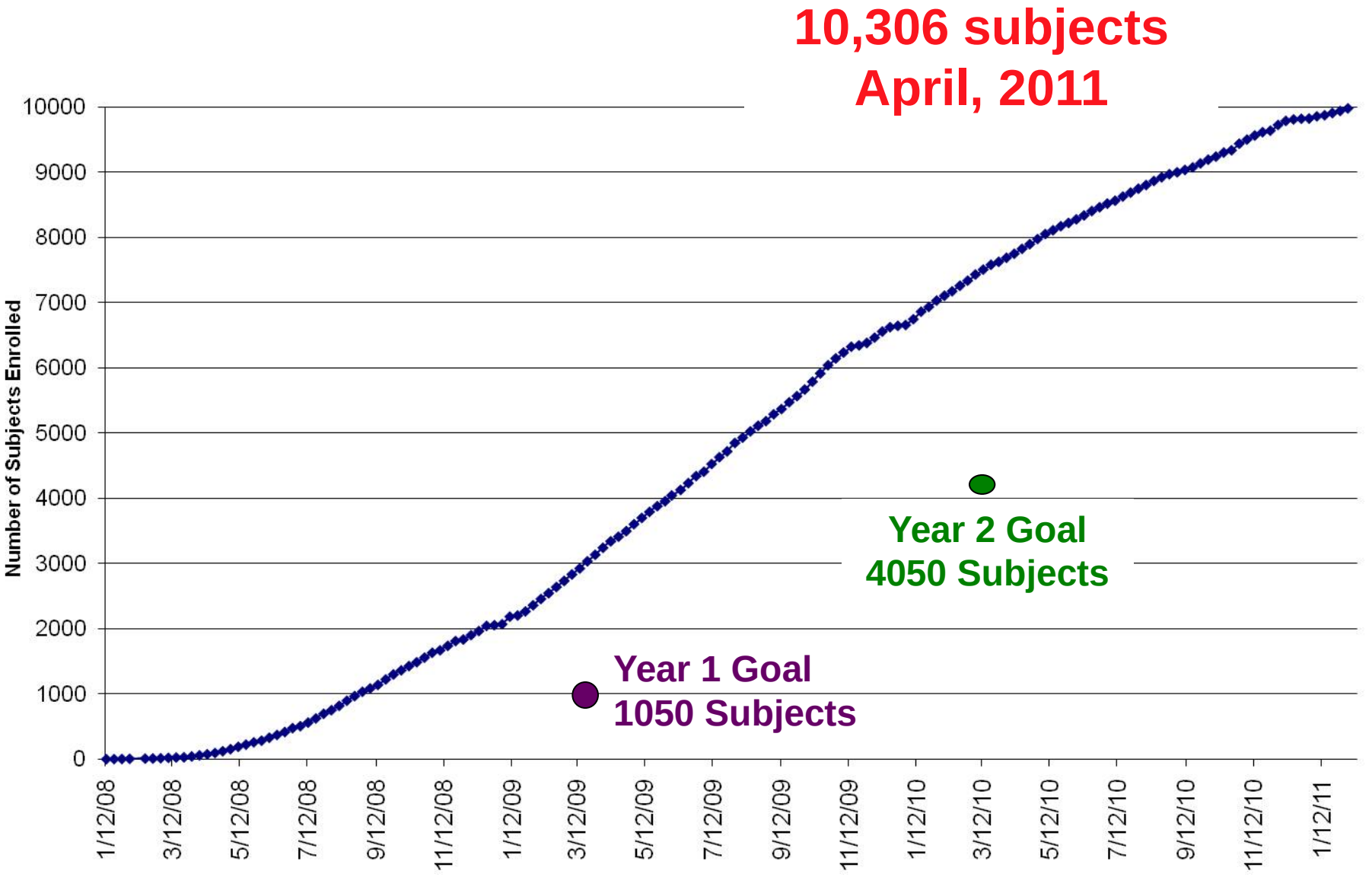
May 2012

Russell Bowler, M.D., Ph.D.
National Jewish Health

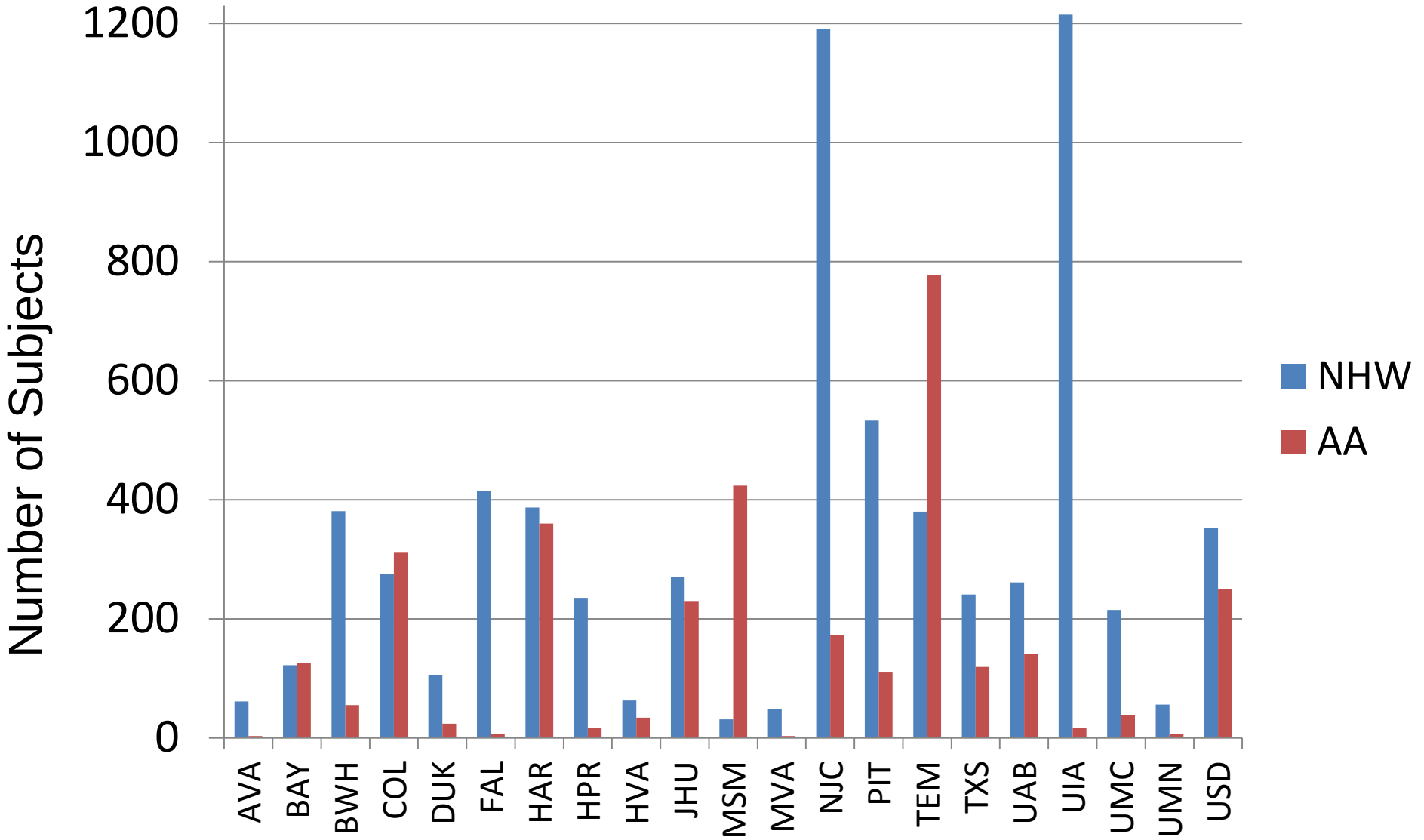
Objectives

- Cohort
  - 10,000 smokers (>10 pack year) age 45-80
  - 2/3 white; 1/3 black
- Aims
  - Define quantitative CT phenotypes
  - GWAS for CT and clinical phenotypes of COPD
  - Longitudinal co-morbidities self reported every 6 months

Enrollment in COPDGene



Recruitment by Clinical Center



1. National Jewish 2. Iowa
3. Temple 4. Harbor

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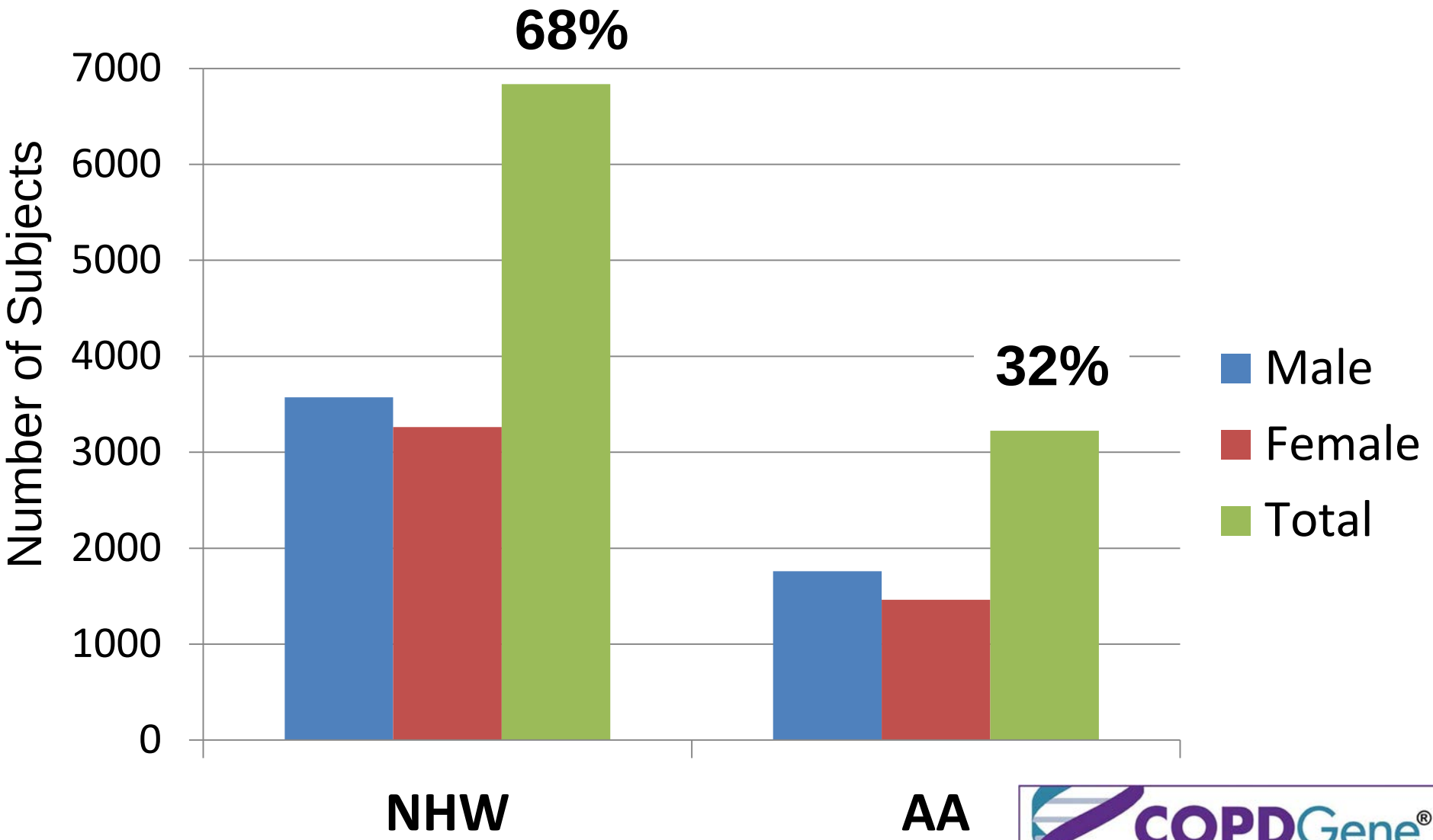
Final Cohort - 10,306



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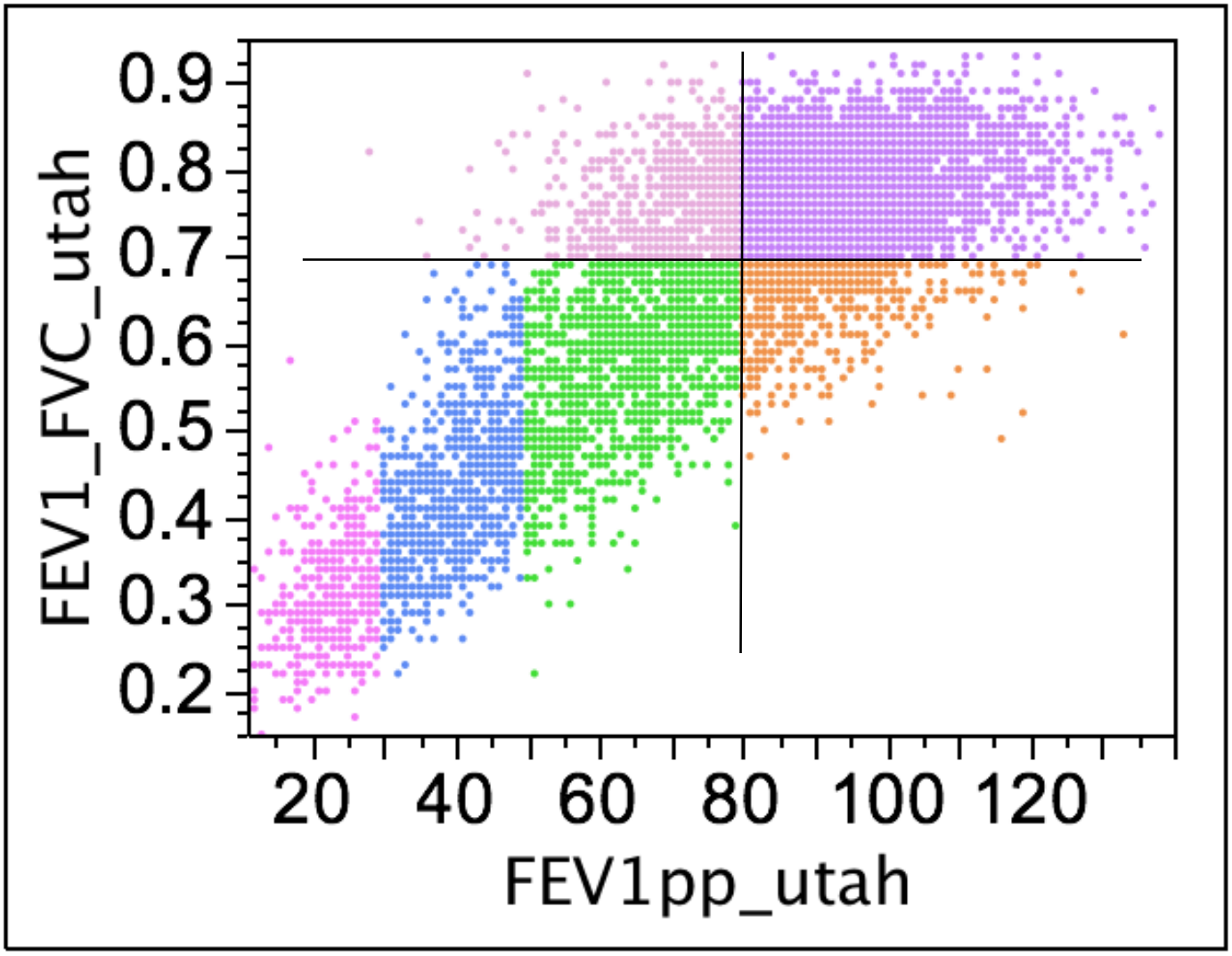
Spirometry



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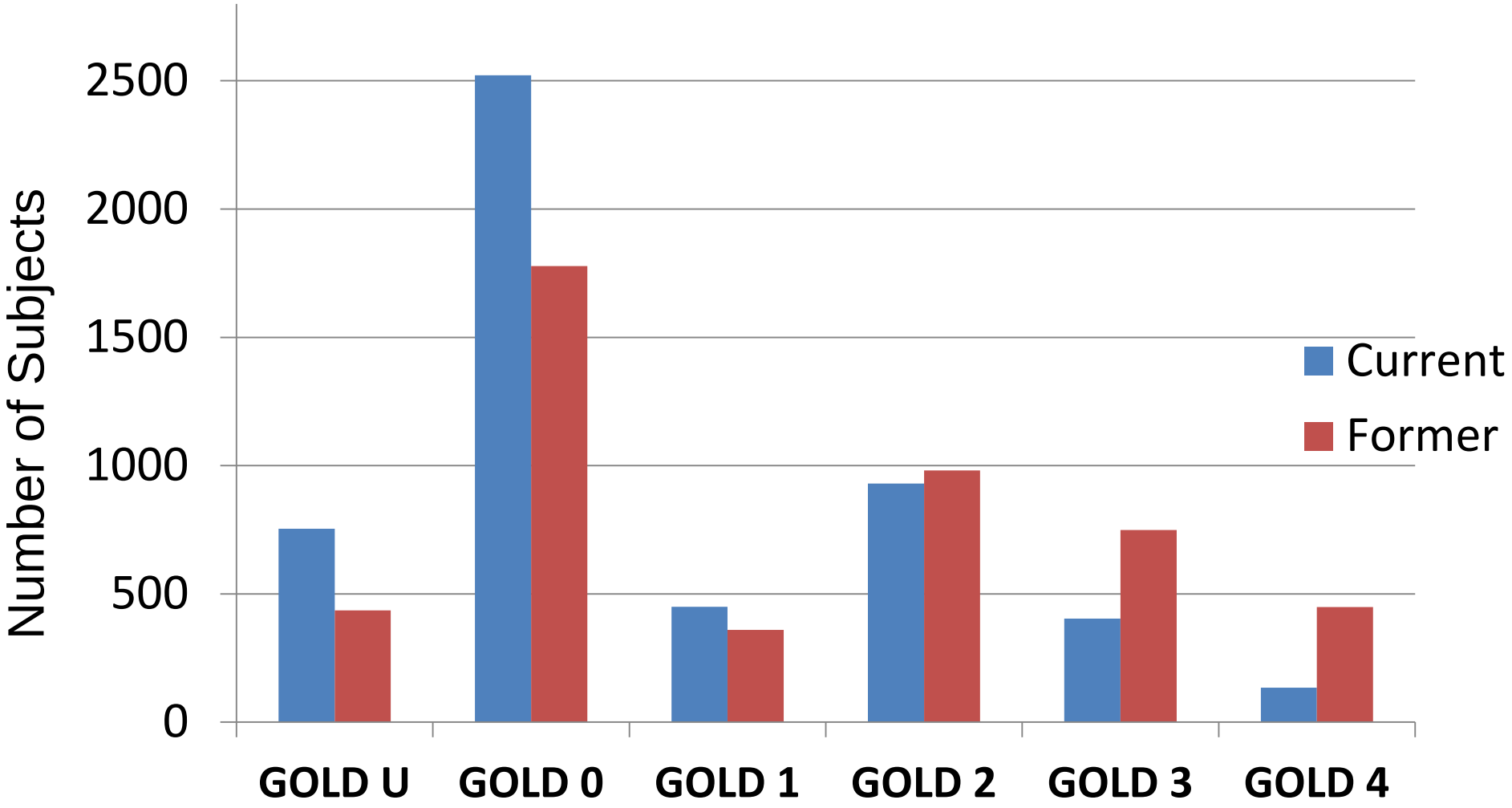
Smoking Status



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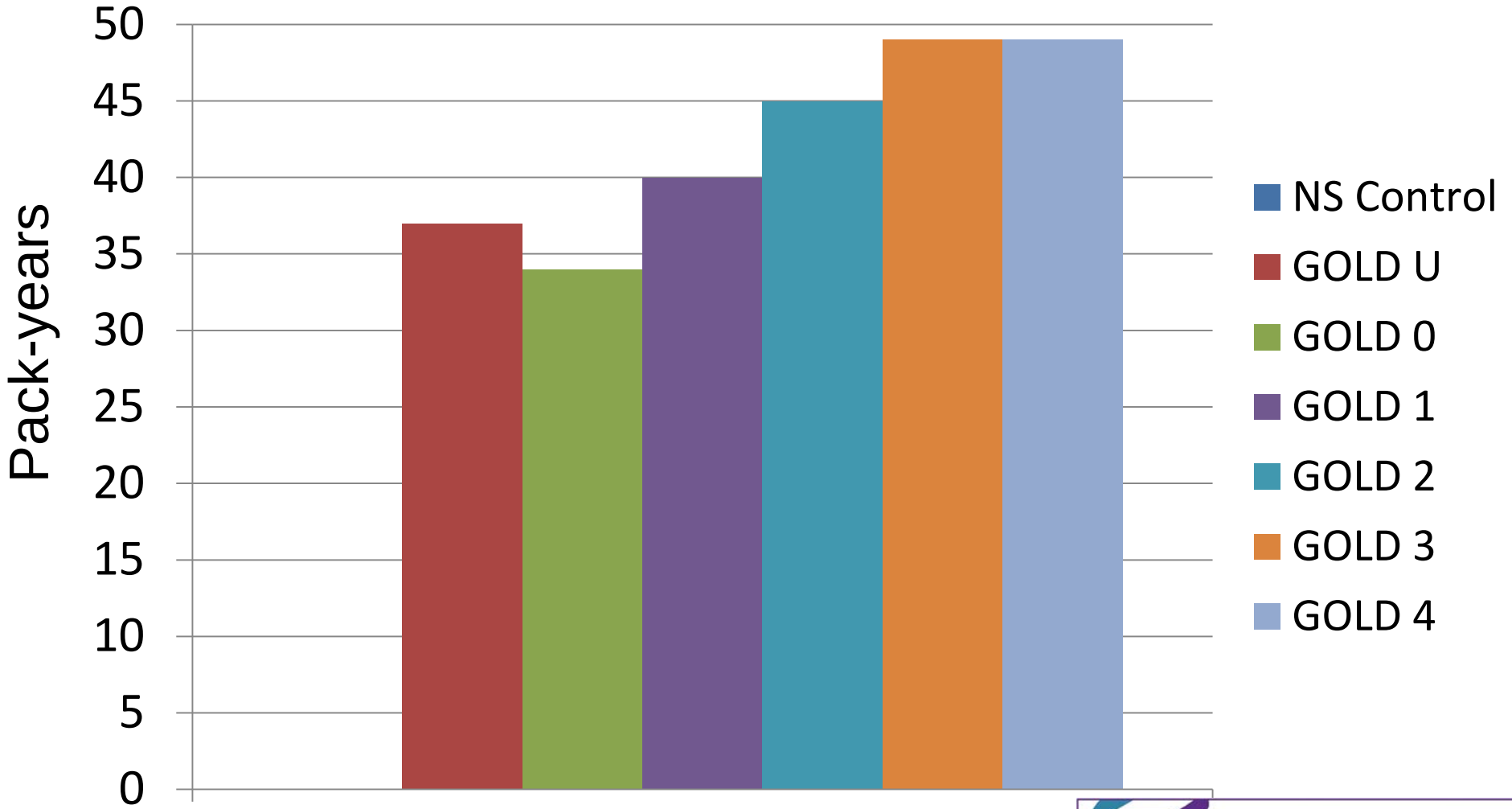
COPDGene Cohort

Median Smoking History (pack years)



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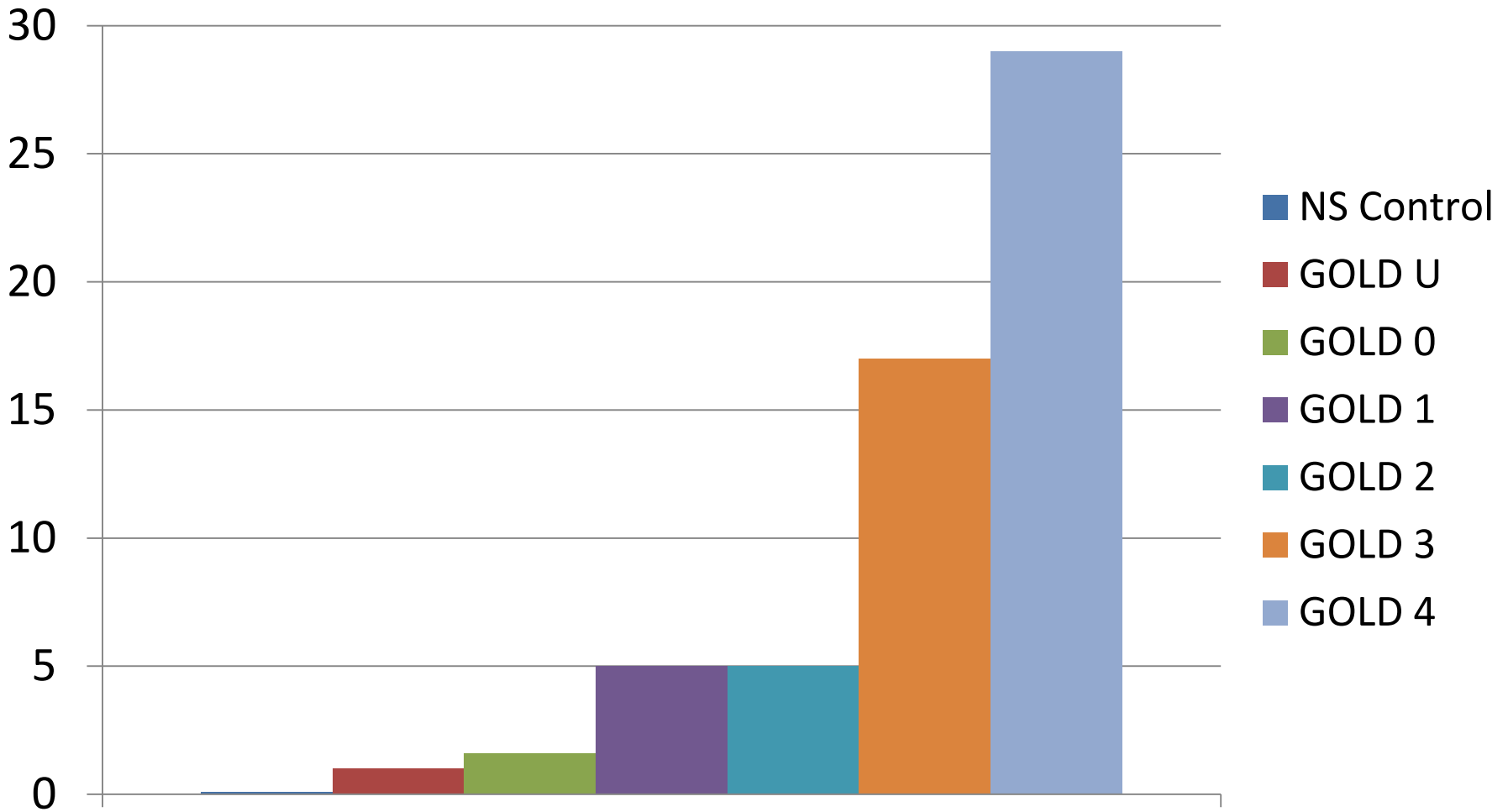
Percent Emphysema (Median)



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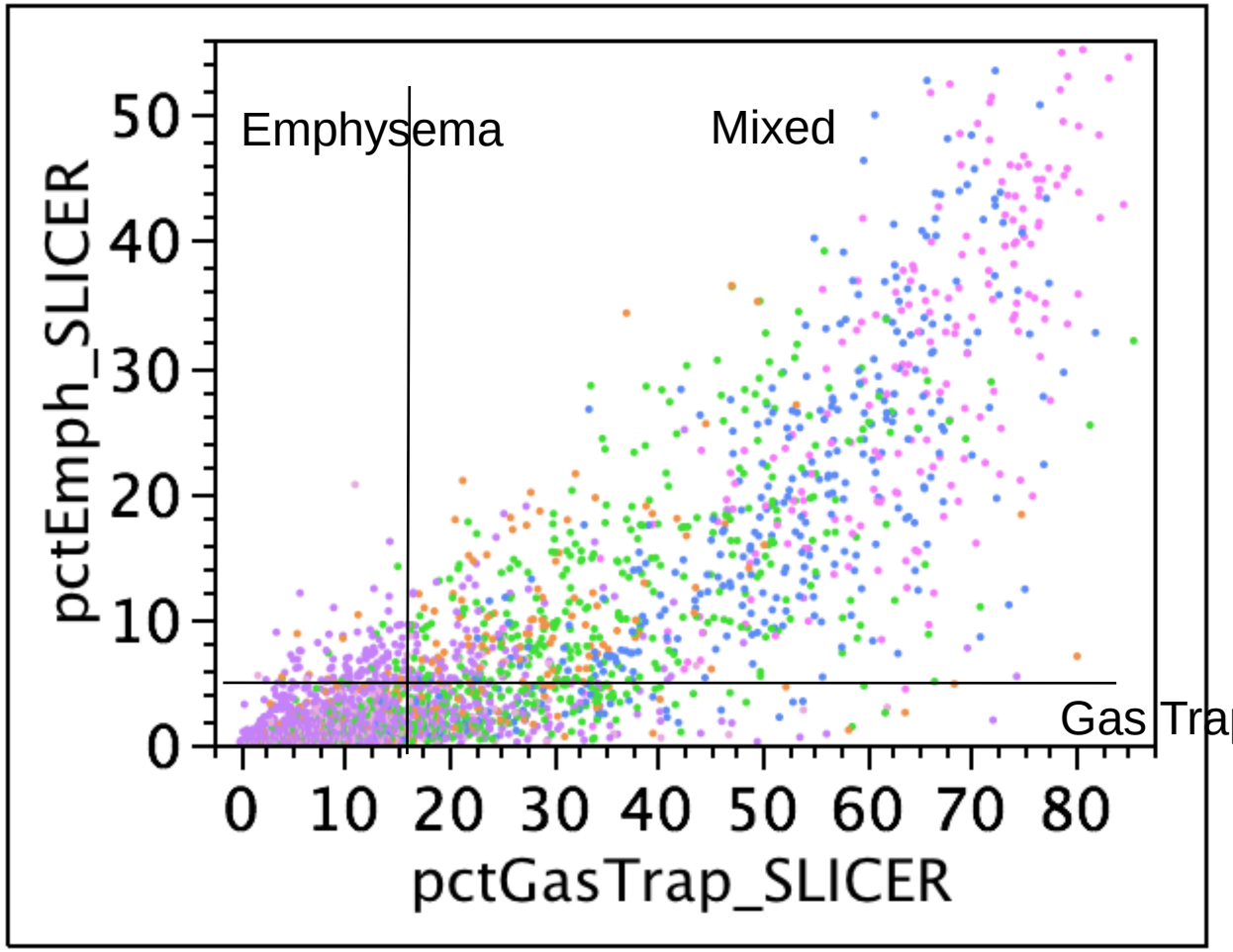
Emphysema – Gas Trapping
All Subjects



GOLD 0 - purple
GOLD 1 - orange
GOLD 2 - green
GOLD 3 - blue
GOLD 4 - pink
GOLD U - pink

N=6949

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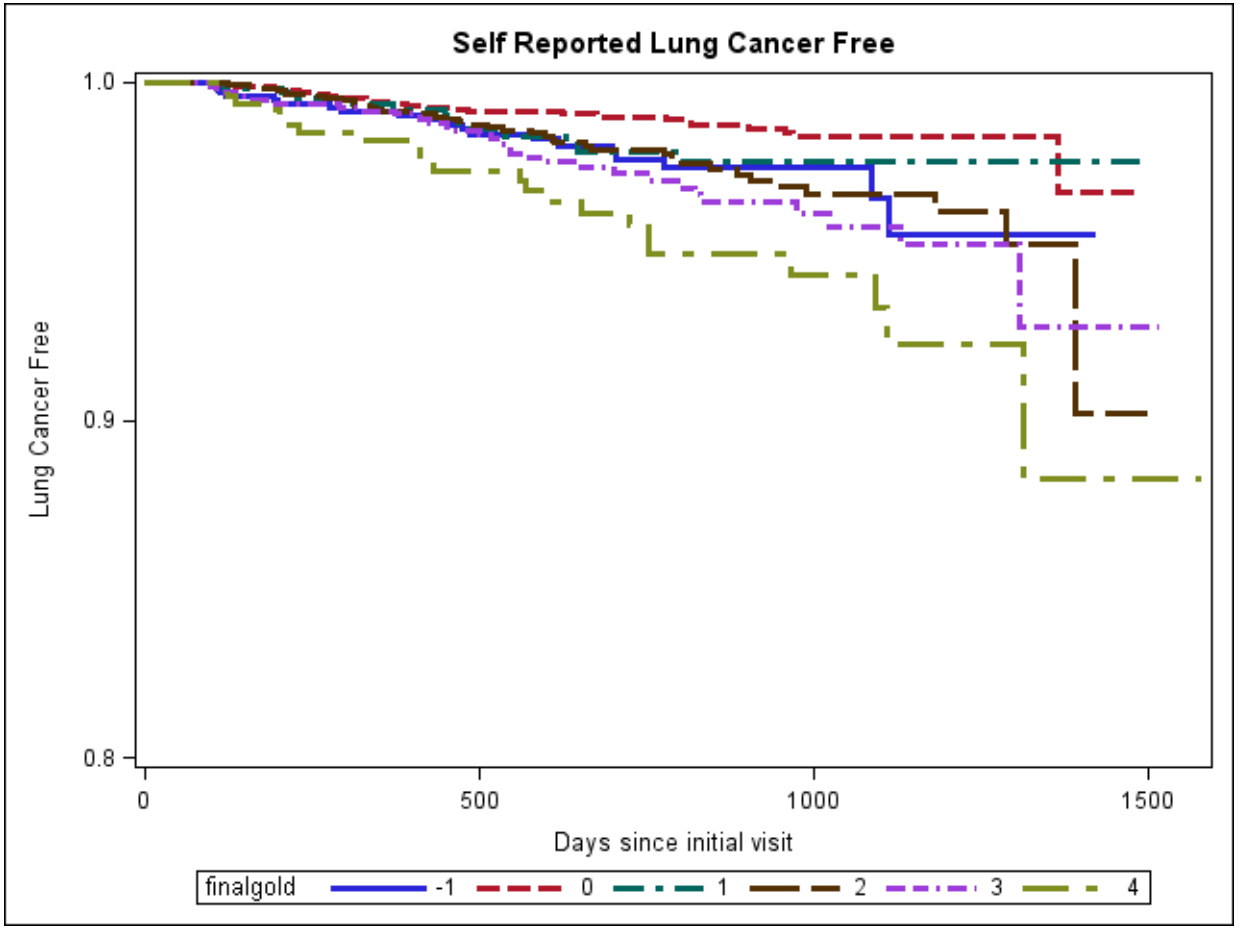
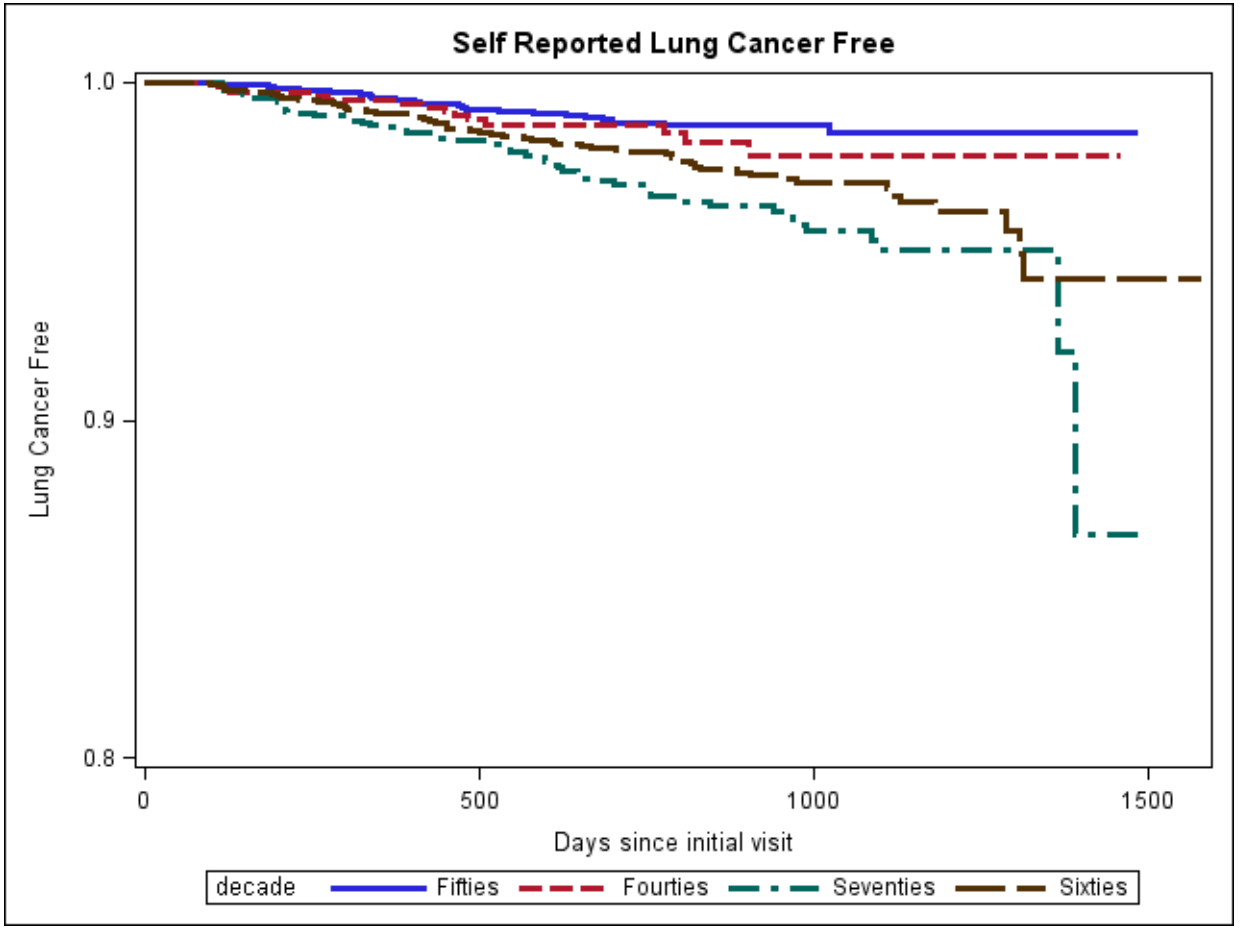
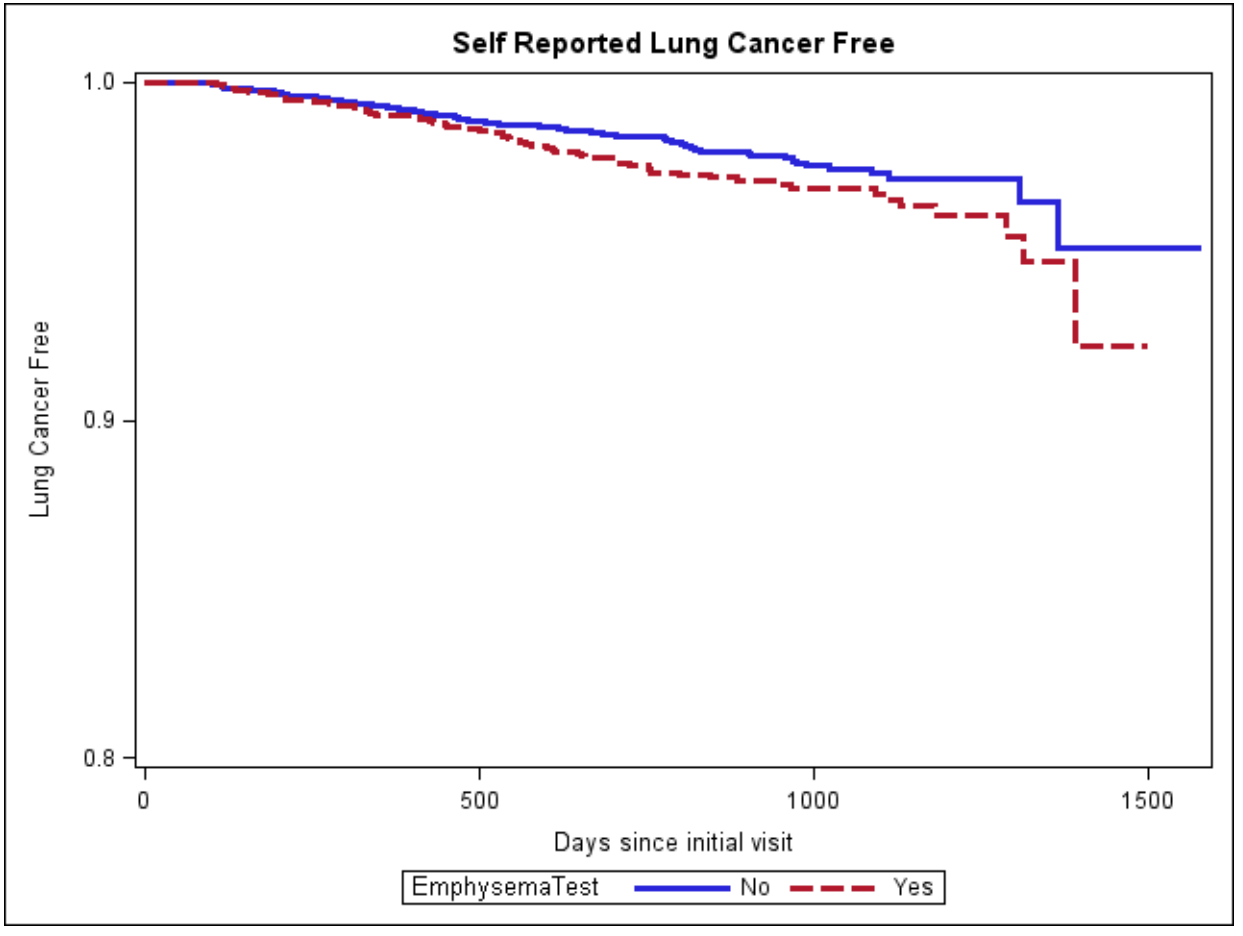
Self Reported Lung Cancer by GOLD



Self Reported Lung Cancer by Age



Self Reported Lung Cancer by GOLD



Types and Stages sample for BWH and NJH

Histopathologic Type	Stage at Diagnosis	Stage at Diagnosis(TNM)
AAH		
clinical dx	IA	cT1N0M0
Non-small cell lung cancer	IB	cT2N0M0
Non-small cell lung cancer	IIA	pT1N1M0
Non-small cell lung cancer	IIA	pT1pN1M0
Non-small cell lung cancer	IB	pT2pN0M0
Non-small cell lung cancer	IA	T1aN0
Non-small cell lung cancer	IA	T1aN0
Non-small cell lung cancer	IA	T1aN0
Non-small cell lung cancer	IA	T1aN0
Non-small cell lung cancer	IA	T1aN0M0
Non-small cell lung cancer	IA	T1aN0M0
Non-small cell lung cancer	IB	T2aN0M0
Non-small cell lung cancer	IB	T2aN0M0
Non-small cell lung cancer	IIIA	TxpN2M0

Potential use of COPDGene

- **GWAS data available**
- **Radiographic Subtypes**
- **Biomarkers**
- **Health Services Research**

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