

ELEVAIR™ Endobronchial Coil System

RENEW Trial Design

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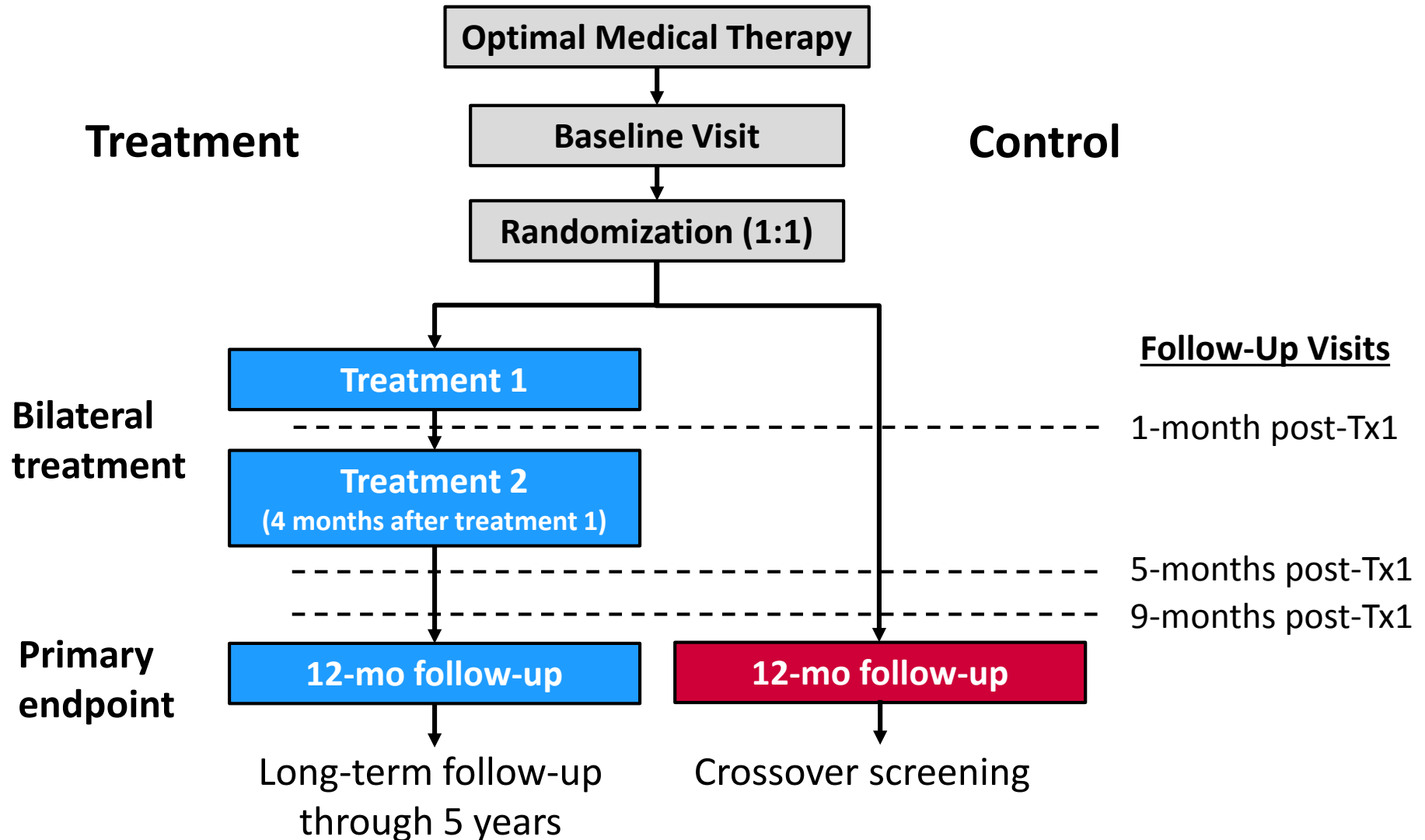
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Overview of Trial Design Presentation

- RENEW Trial Design
 - Entry Criteria
 - Effectiveness Endpoints
 - Statistical Methods
 - Pre-specified Subpopulations
- Crossover Study Design

RENEW Pivotal Randomized Trial Design



RENEW Original Key Trial Entry Criteria

Entry criteria

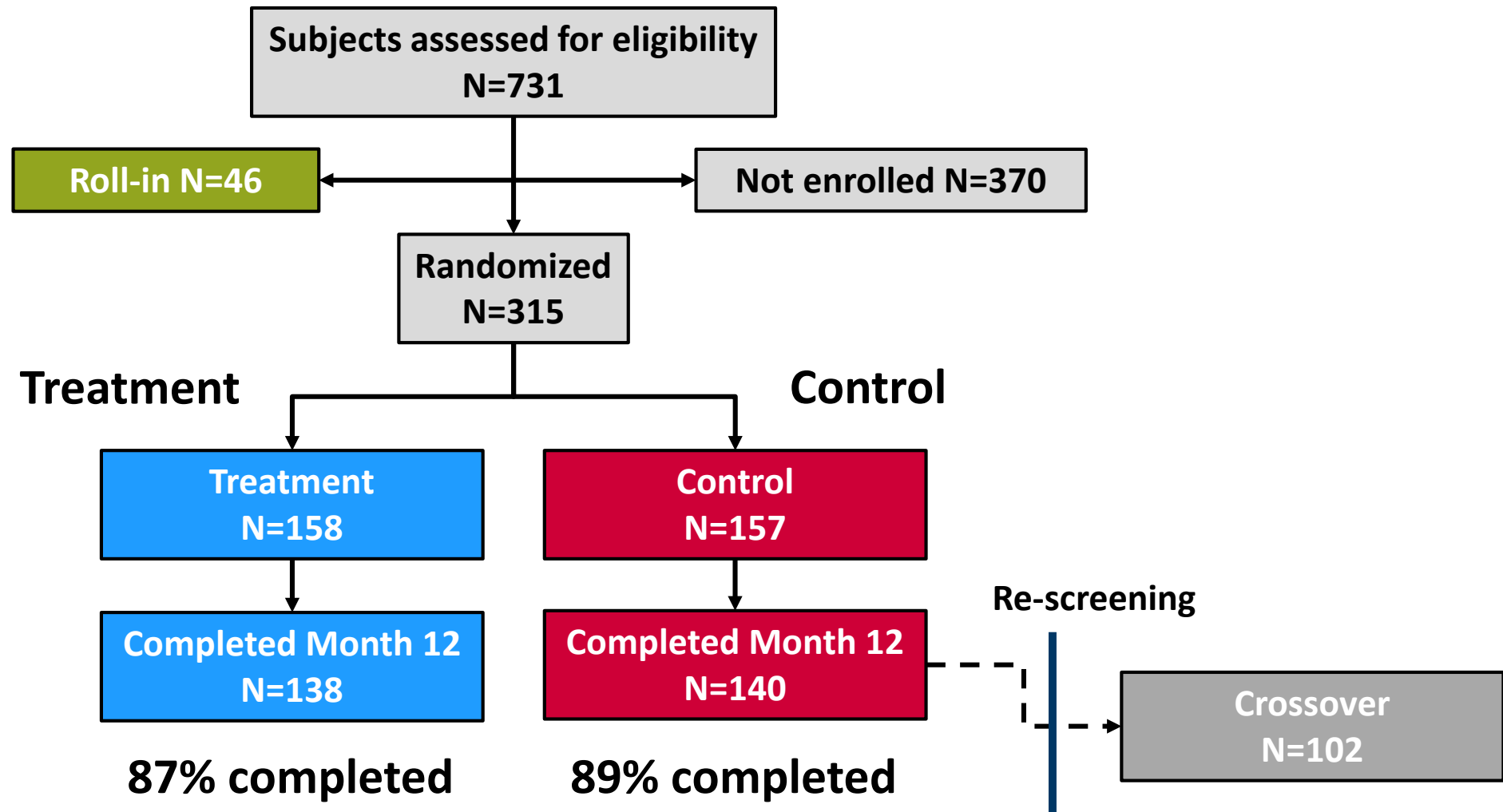
- CT scan indicated bilateral emphysema, as determined by the Core Radiology Lab using the criteria presented in the "CT Scoring Plan for Core Radiology Lab"
- $FEV_1 \leq 45\%$ predicted
- Dyspnea scoring ≥ 2 , mMRC scale 0-4
- Smoking cessation ≥ 8 weeks prior
- Pulmonary or maintenance respiratory rehabilitation
- Ability to walk >140 meters (150 yards) in 6 minutes
- $RV \geq 225\%$ predicted

RENEW *Amended* Key Trial Entry Criteria

Entry criteria

- CT scan indicated bilateral emphysema, as determined by the Core Radiology Lab using the criteria presented in the "CT Scoring Plan for Core Radiology Lab"
- $FEV_1 \leq 45\%$ predicted
- Dyspnea scoring ≥ 2 , mMRC scale 0-4
- Smoking cessation ≥ 8 weeks prior
- Pulmonary or maintenance respiratory rehabilitation
- Ability to walk >140 meters (150 yards) in 6 minutes
- ~~$RV \geq 225\%$ predicted~~ $RV \geq 175\%$ predicted

RENEW Consort Diagram



RENEW Effectiveness Endpoints

Primary Endpoint

Δ 6MWT at 12 months

Secondary Endpoints

$\% \Delta FEV_1$

Δ SGRQ

% 6MWT responders (≥ 25 m)

Additional Exploratory Effectiveness Endpoints

Δ RV

Δ RV/TLC

% SGRQ responders (≤ -4 points)

RENEW Effectiveness Endpoints

Family-wise Type 1 Error Control

Primary Endpoint

Δ 6MWT at 12 months



If significant at $\alpha=0.025$ 1-sided

Secondary Endpoints

$\% \Delta$ FEV₁

Δ SGRQ

% 6MWT responders (≥ 25 m)



Hochberg step-up procedure
at $\alpha=0.025$ 1-sided

Additional Exploratory Effectiveness Endpoints

Δ RV

Δ RV/TLC

% SGRQ responders (≤ -4 points)



No alpha-control

RENEW Effectiveness Analysis Methods

Non-parametric Rank ANCOVA

Δ 6MWT

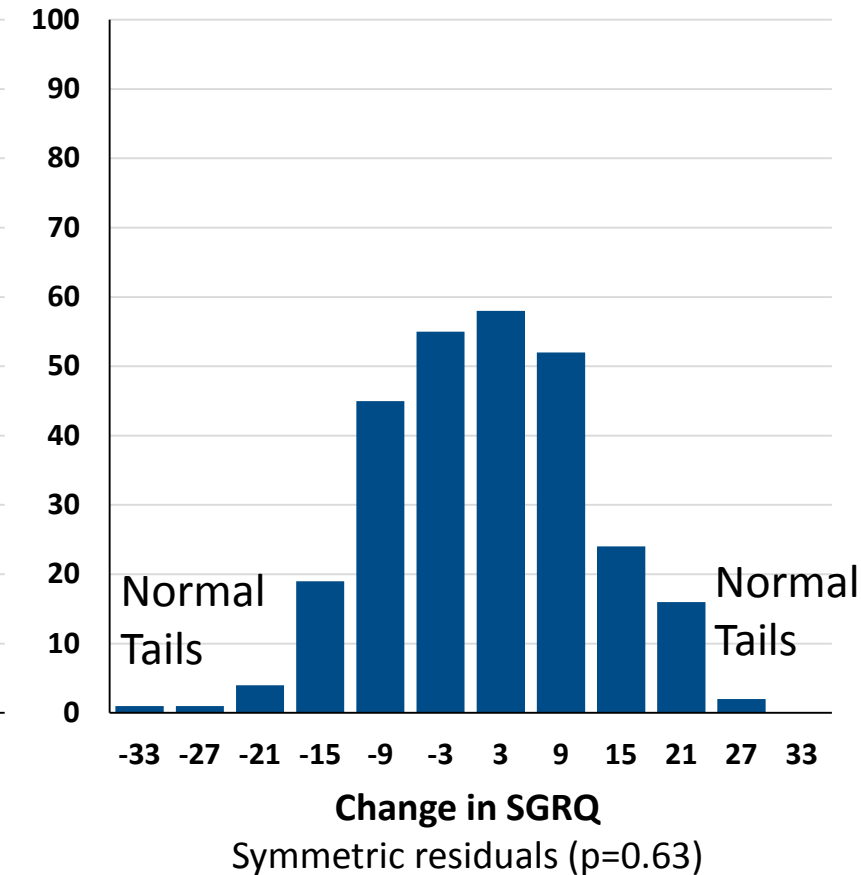
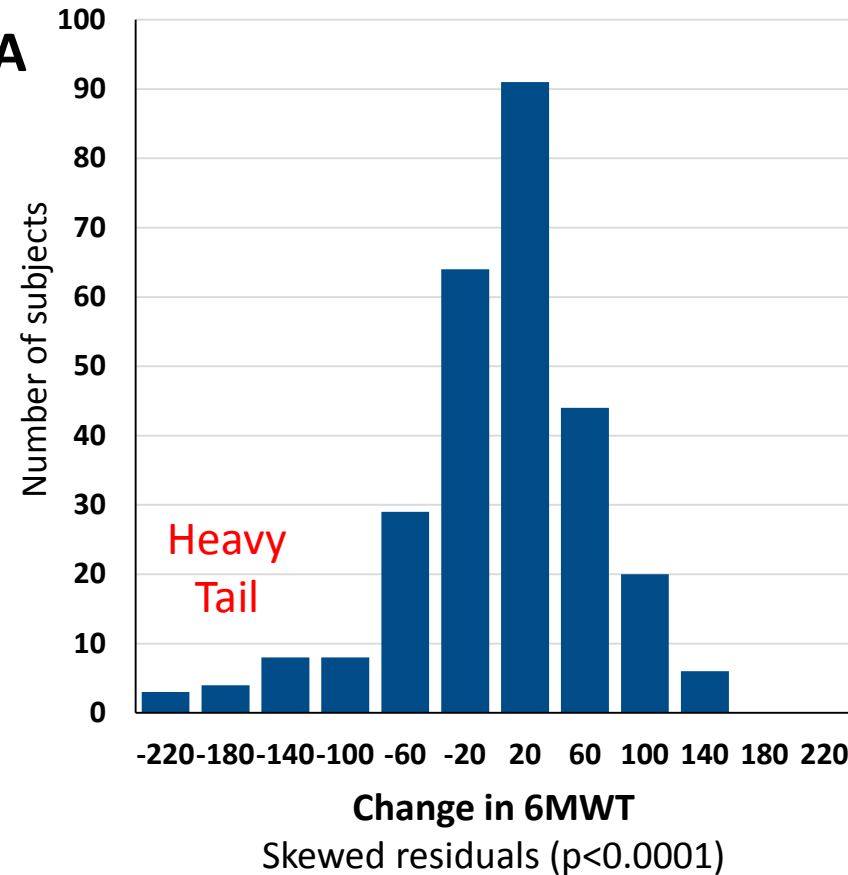
% Δ FEV₁

Parametric ANCOVA

Δ SGRQ

Logistic Regression

% 6MWT responders



RENEW Effectiveness Analysis Methods

Primary Endpoint

Δ 6MWT at 12 months

Secondary Endpoints

$\% \Delta FEV_1$

Δ SGRQ

$\%$ 6MWT responders (≥ 25 m)

Additional Exploratory Effectiveness Endpoints

Δ RV

Δ RV/TLC

$\%$ SGRQ responders (≤ -4 points)

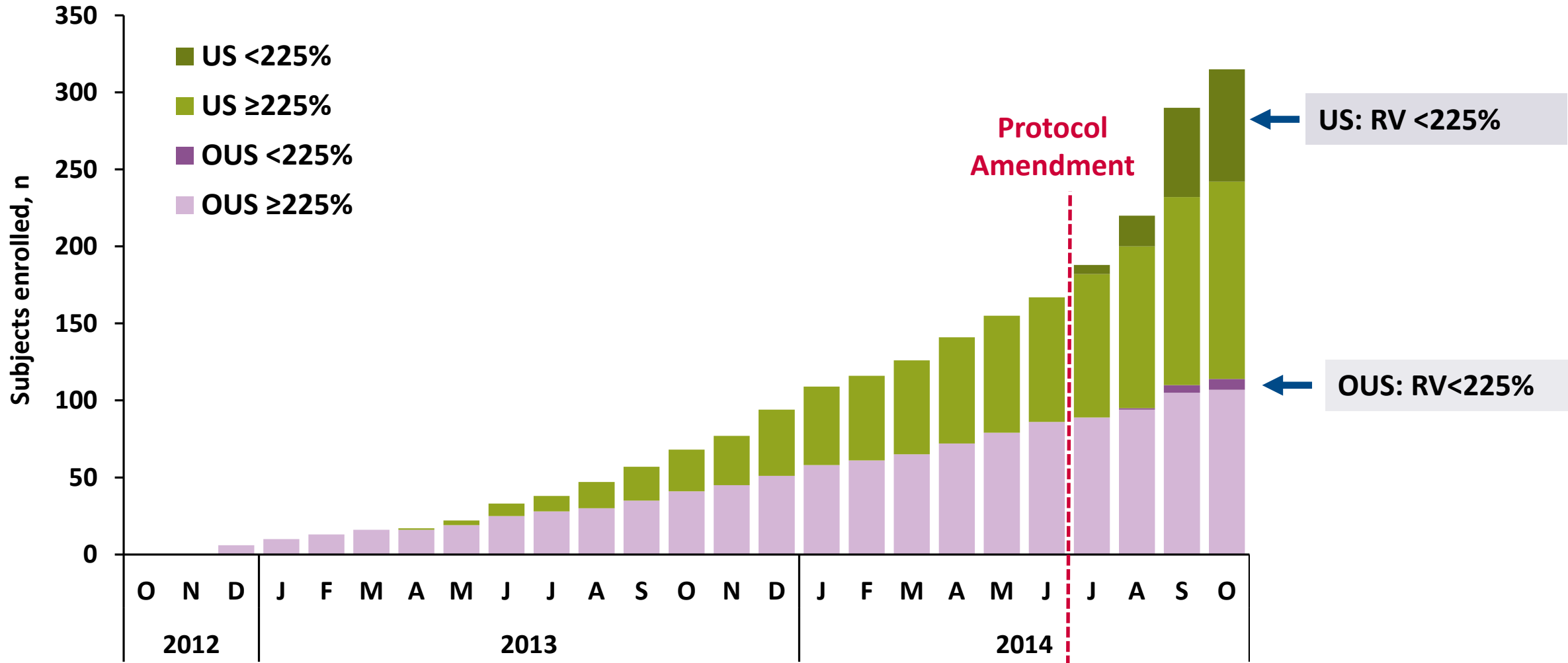
Responder rate analysis

- Clinically meaningful benefit to the subject
- Direct measure of clinical significance

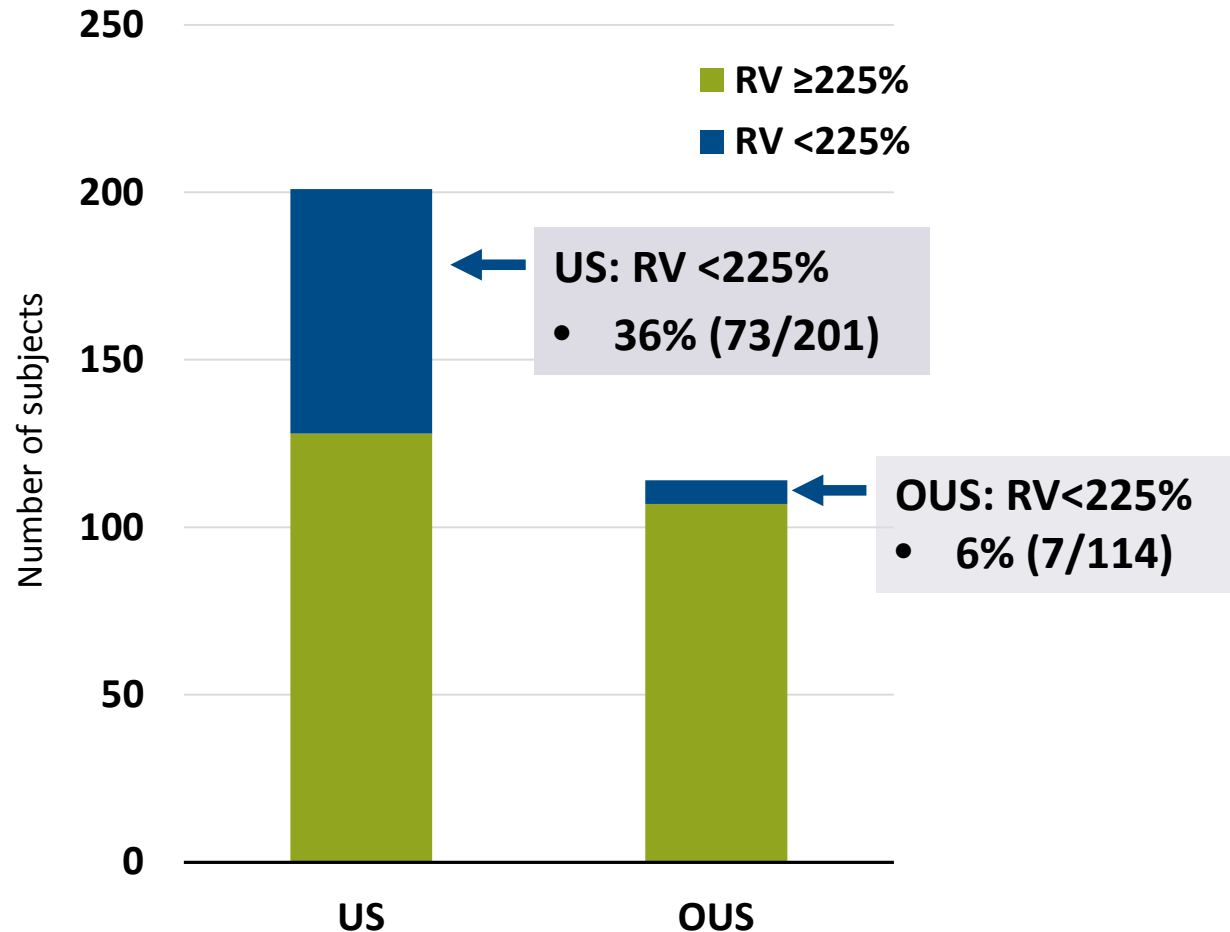
Pre-specified Subpopulations Not Alpha-Controlled

- Baseline RV status: $RV \geq 225\%$ vs $RV < 225\%$
- Region: US vs OUS
- Disease status: homogeneous vs heterogeneous
- Gender: male vs female

Enrollment in RENEW by Region (OUS vs US) and RV (<225% or ≥225%)



Imbalance of RV (<225% or ≥225%) by Region (OUS vs US)



- Regions were highly imbalanced by baseline RV status
- US enrolled substantially more subjects with RV <225%
- This imbalance drives regional differences in effectiveness

See slides CD-28 through CD-30.

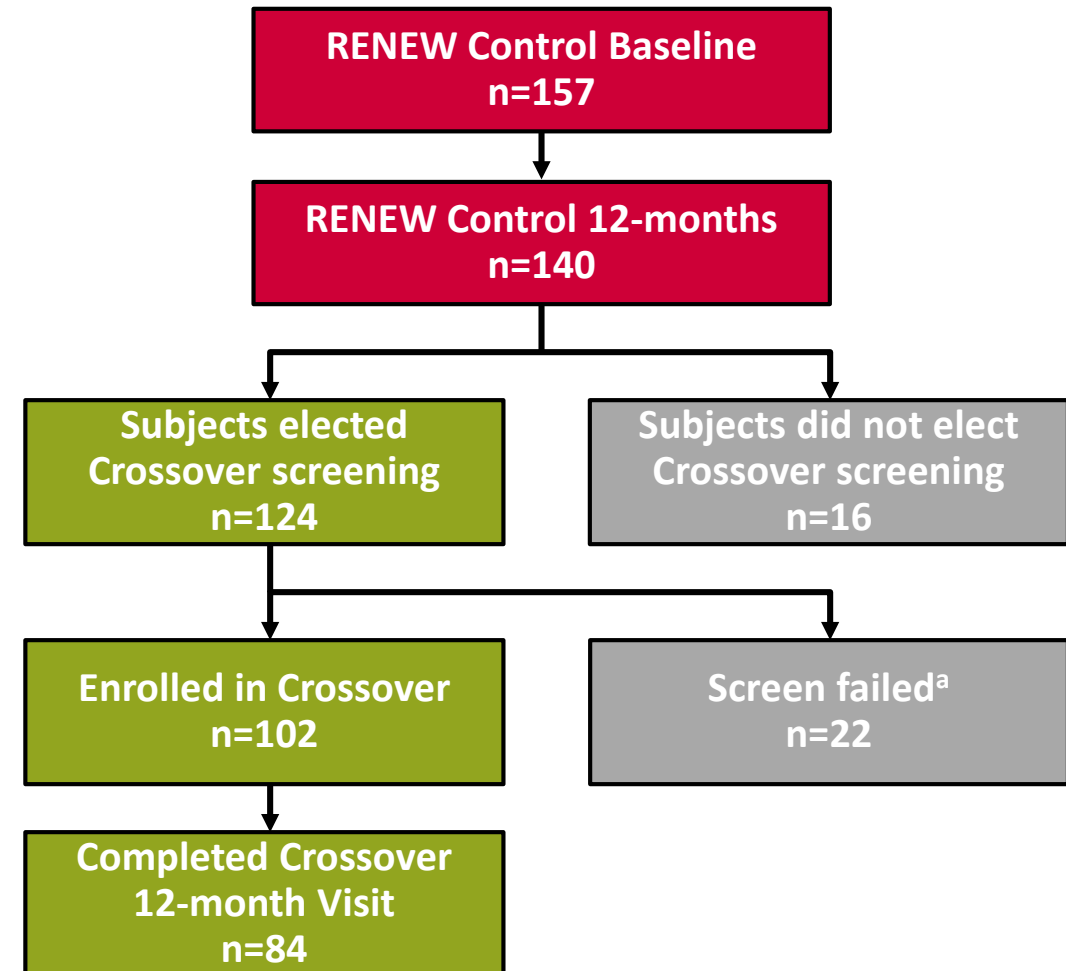
Note: Figure was not provided within the PMA; however, underlying information / analysis was included.

Scientific Credibility of the $RV \geq 225\%$ Subpopulation

- The trial met the primary analysis for the entire ITT population
- Reduction in RV is the mechanism of action of the coils
- $RV \geq 225\%$ was the original population and 75% of total enrollment
- Empirical evidence supports the increasing differential benefit for the coils for RV

Crossover Study

- RENEW control group that met similar entry criteria
- Single-armed, observational cohort, with no concurrent control
 - Scientific limitations compared to randomized controlled trials
- Of the 157 controls, 102 subjects crossed over
 - Self-selected, positive performers
 - Potential mathematical regression-to-the-mean
 - Disease progression over time



^a1 subject passed screening, but was not enrolled due to physician decision.