P2.100: Constructing the 10th Edition Lung Cancer Staging Cohort to Develop a Globally Applicable TNM Classification.

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INTRODUCTION

- For the past 25 years, large international IASLC databases analyzed by the Staging and Prognostic Factors Group have provided the primary evidence supporting revisions to the UICC/AJCC lung cancer TNM classification.
- To inform development of the 10th edition staging database, we evaluated the geographic distribution of cases in prior IASLC cohorts and developed a sampling strategy designed to support robust global participation and regional validation.

METHODS

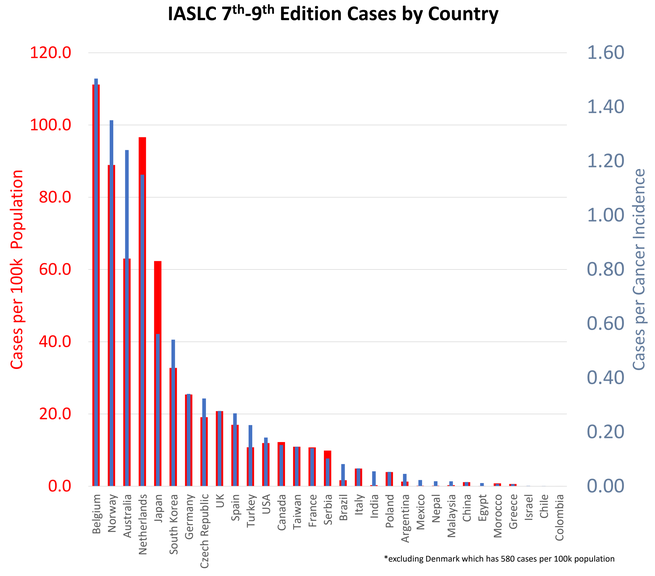
- We evaluated the distribution of cases from the 7th-9th edition IASLC databases.
- We standardized to the total population and lung cancer incidence by country, using global population and cancer incidence from 2022-2023 (GLOBOCAN).
- Sample sizes for the primary lung protocol objectives were estimated to detect significant differences in overall survival between aggregate stage sub-groups, adjusting for the intraclass correlation coefficient (ICC) to account for within-center correlation in a multicenter, globally distributed dataset.

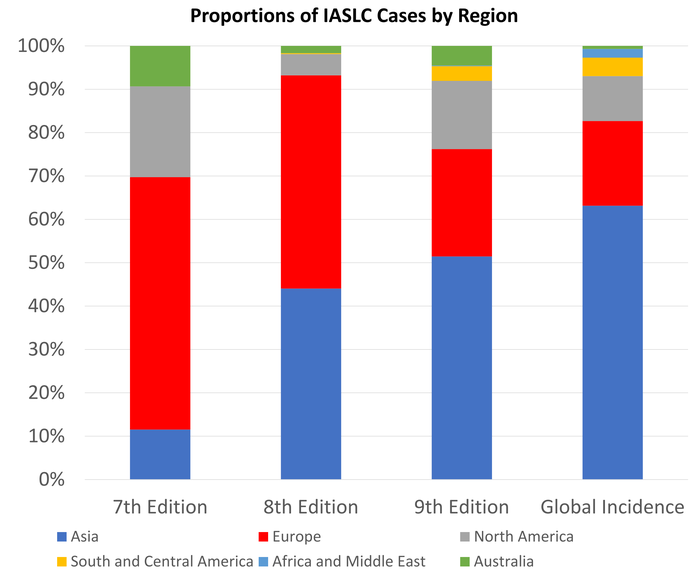
10th EDITION TARGET EXAMPLE

75,000 cases (ICC = 0.04) will provide adequate power across stage groups to meet primary protocol objectives.

Group	IA	IB	IIA	IIB	IIIA	IIIB	IIIC	IVA	IVB
Target N	30,689	9,174	5,215	6,937	6,047	1,988	1,123	7,145	6,712

RESULTS: 7th – 9th EDITION CASE DISTRIBUTION





7th-9th edition cases were most frequently from Europe (N=136,088; 43%), followed by Asia (N=117,422; 37%), North America (N=45,398; 14%), Australia (N=16,663; 5%), and South/Central America (N=4,415; 1%).

TAKE HOME MESSAGE

The 10th edition IASLC staging database is being constructed to ensure the TNM classification is a universal, globally applicable system.

We will use stratified analyses to evaluate regional differences, constructing the cohort to have adequate power to validate the prognostic value of stage groups within each region.

10th EDITION PLAN

Goals for the 10th Edition Sample:

The 10th edition TNM lung cancer staging cohort design will have a renewed focus on acquisition of high-quality data and global validation.

Our goal is to create a stage classification system that is globally valuable and incorporates a robust sample of individuals with lung cancer from across the world treated at diverse institutions.

Goals for the SPFG 10th edition data collection:

1. Reliable, complete data
2. Achieve target sample size
3. Participation from all global regions
4. Participation from diverse institutions

To ensure a robust sample, we will emphasize:

1. Strategic recruiting of sites
2. Electronic Data Capture System
3. Enrollment monitoring
4. Financial support for data entry
5. Data quality monitoring
6. Reserve sampling to fill gaps

To ensure global relevance, we will:

1. Evaluate objectives within each region
2. Compare across key subgroups
3. Conduct sensitivity analysis using weighted analyses and leave-one-out validation to ensure over-represented countries do not have undo influence on overall results.