

BIO / BioMedTracker

Clinical Trial Success Rates Study

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BIO CEO & Investor Conference
February 15th, 2011

MOST RECENT STUDIES

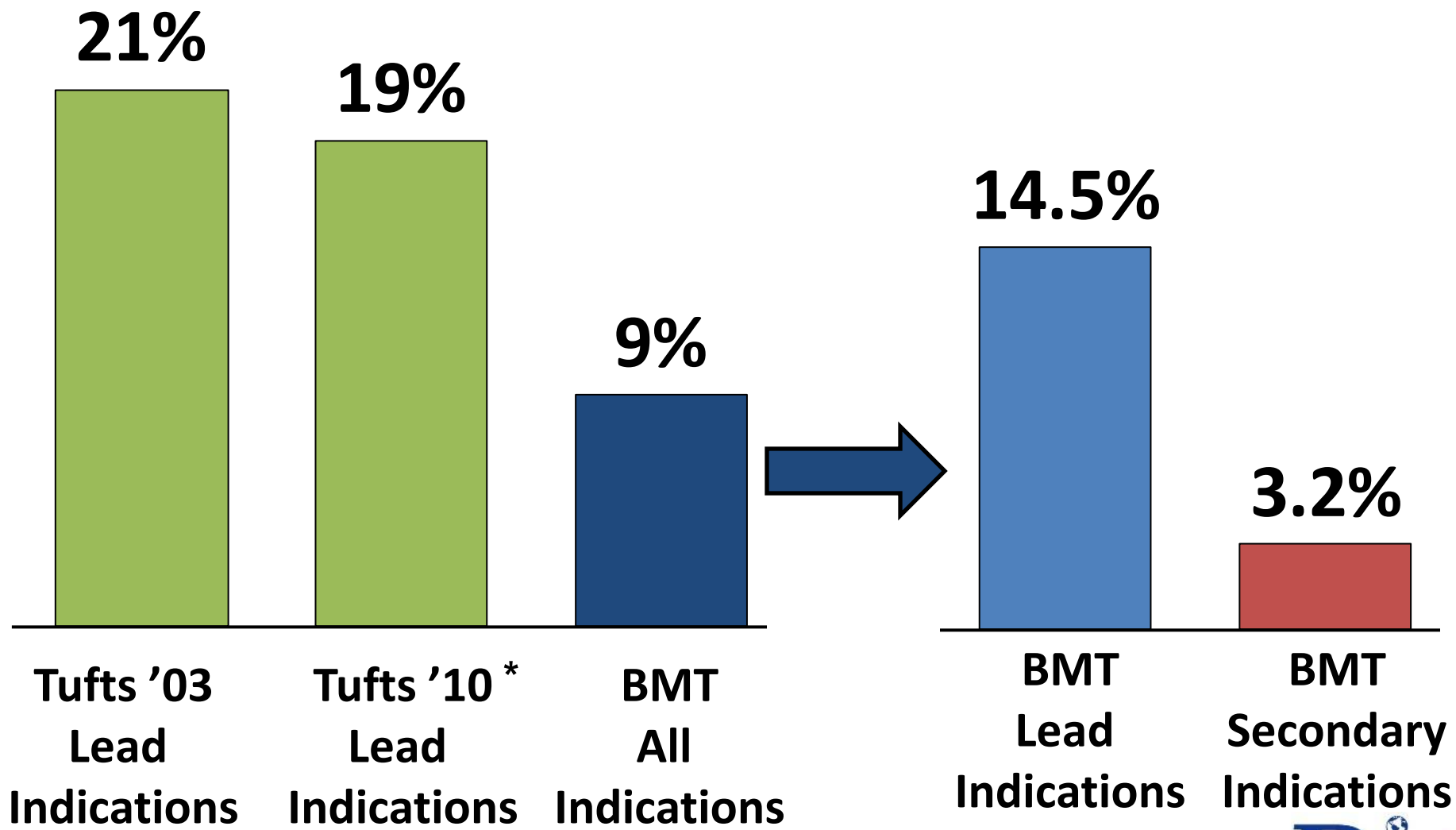
TUFTS 2010*

- 1,738 drugs
(Only Lead indications)
- Must have entered into a Phase I 1993-2004
- Developed by the 50 largest Pharmas

BioMedTracker 2011

- 4,275 drugs
- 7,300 indications
(All indications)
- Any Phase during Oct 2003- Dec 2010
- All companies, Biotechs + Pharma including Private

OVERALL SUCCESS RATES



CALCULATING OVERALL SUCCESS RATES

(simple compounded probabilities)

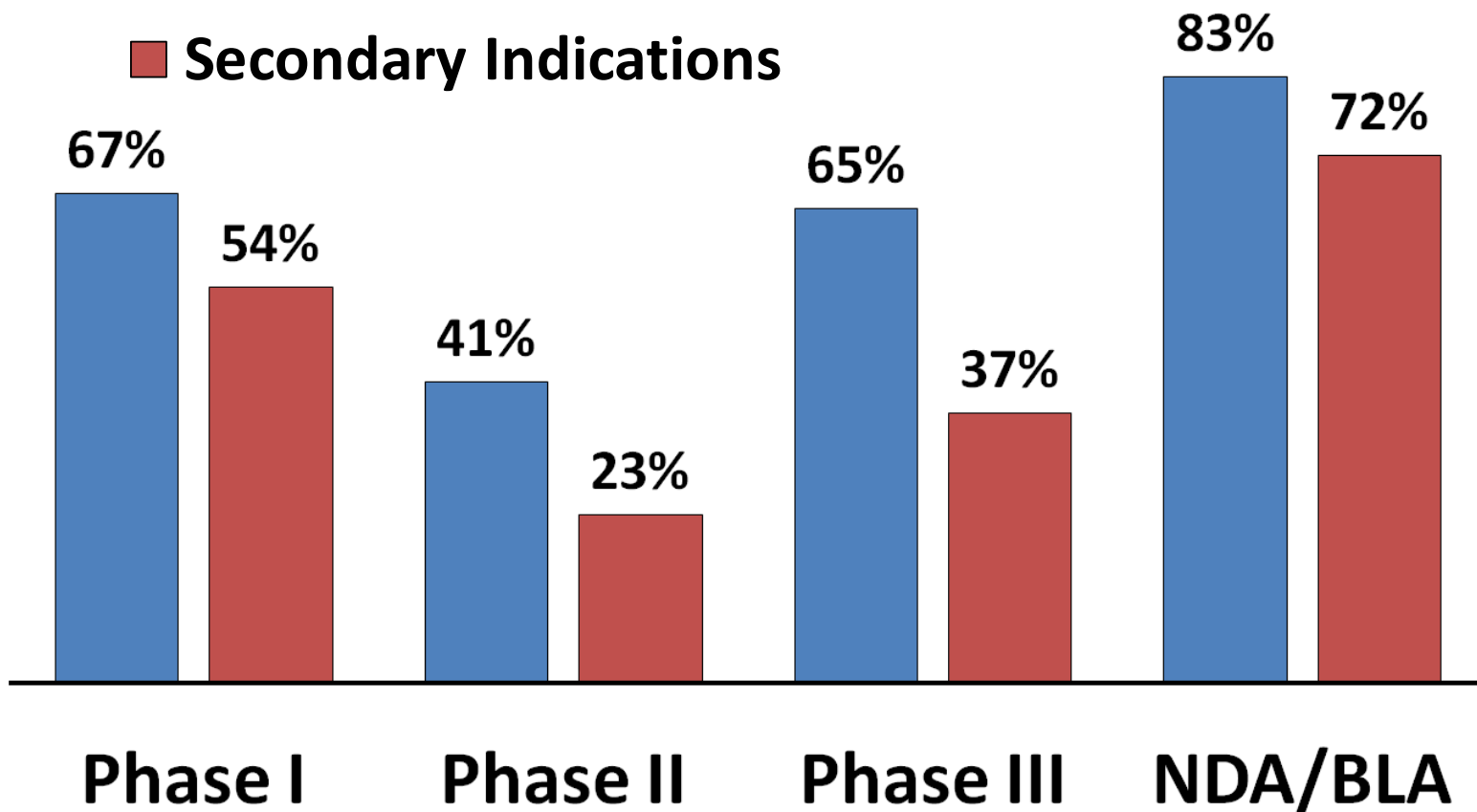
Phase Transition	Phase Success	Phase LOA
P1 to P2	63%	9%
P2 to P3	33%	15%
P3 to NDA/BLA	55%	44%
NDA/BLA to Approval	80%	80%

$$.63 \times .33 \times .55 \times .80 = .09$$

LOWER SUCCESS WITH SECONDARY INDICATIONS AT EACH PHASE

■ Lead Indications

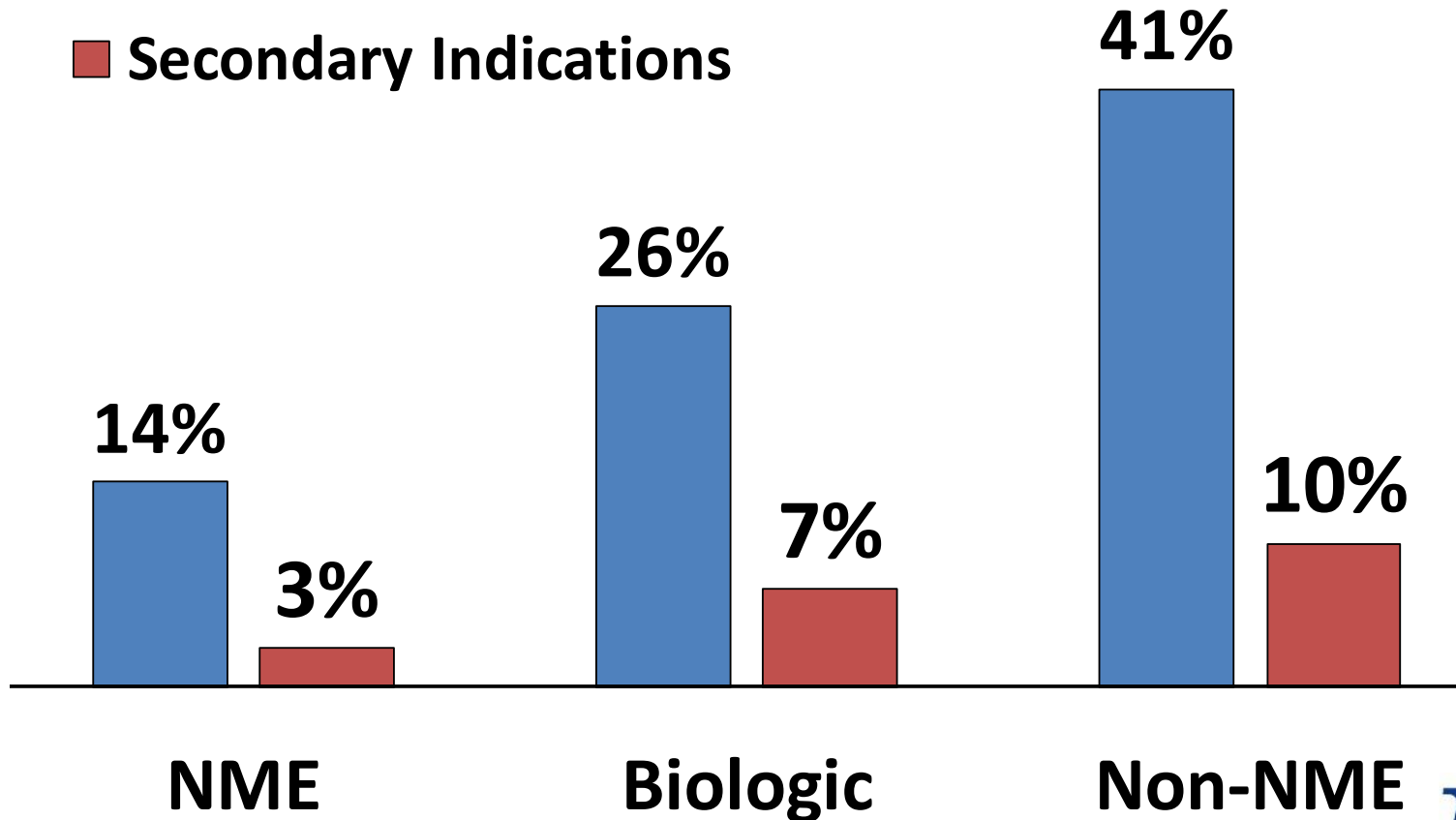
■ Secondary Indications



OVERALL SUCCESS RATES BY MOLECULE TYPE

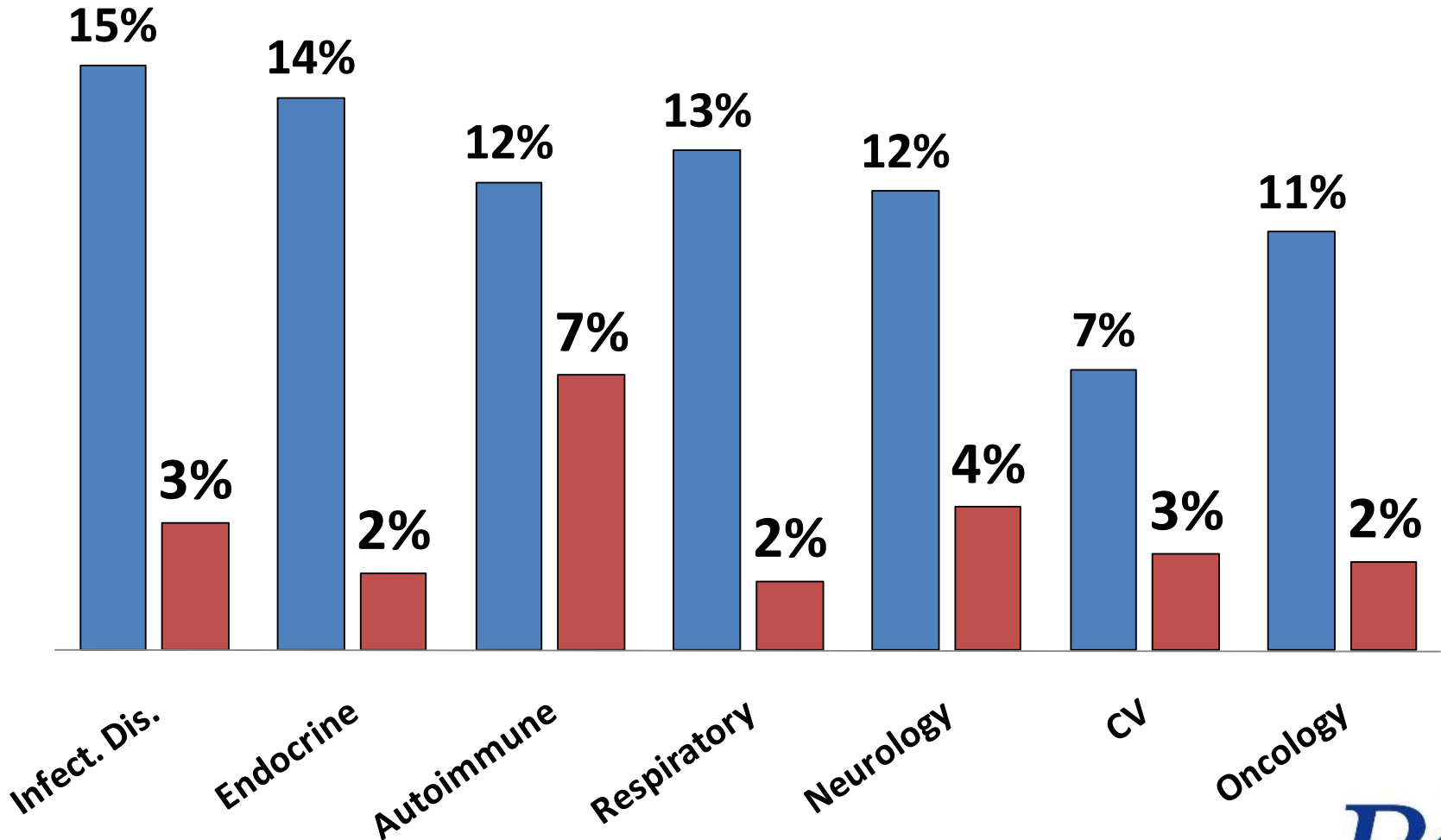
■ Lead Indications

■ Secondary Indications



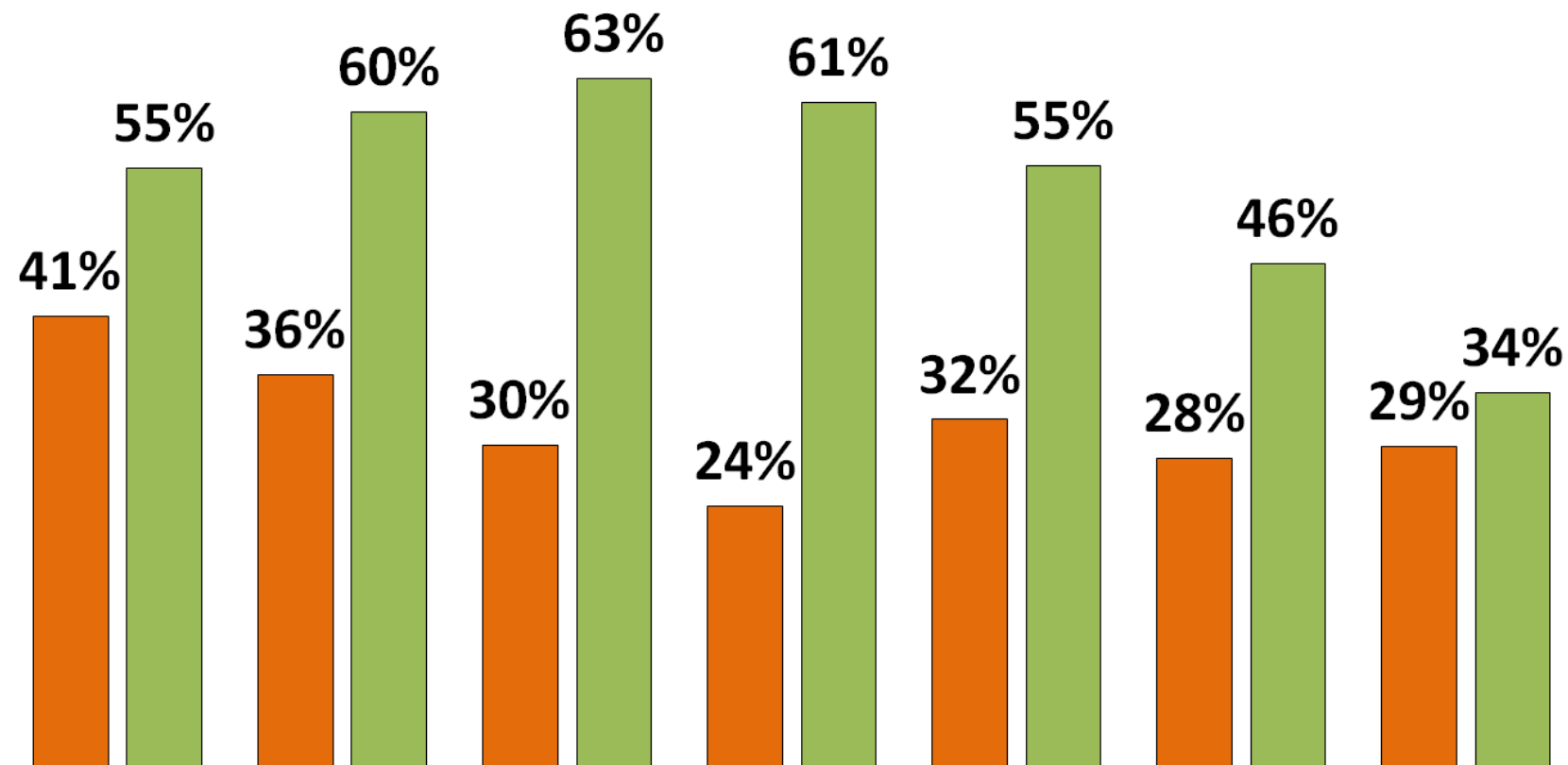
OVERALL SUCCESS BY DISEASE

■ Lead Indications ■ Secondary Indications



OVERALL SUCCESS AT PHASE II AND III

Phase II Phase III



Infect. Dis.

Endocrine

Autoimmune

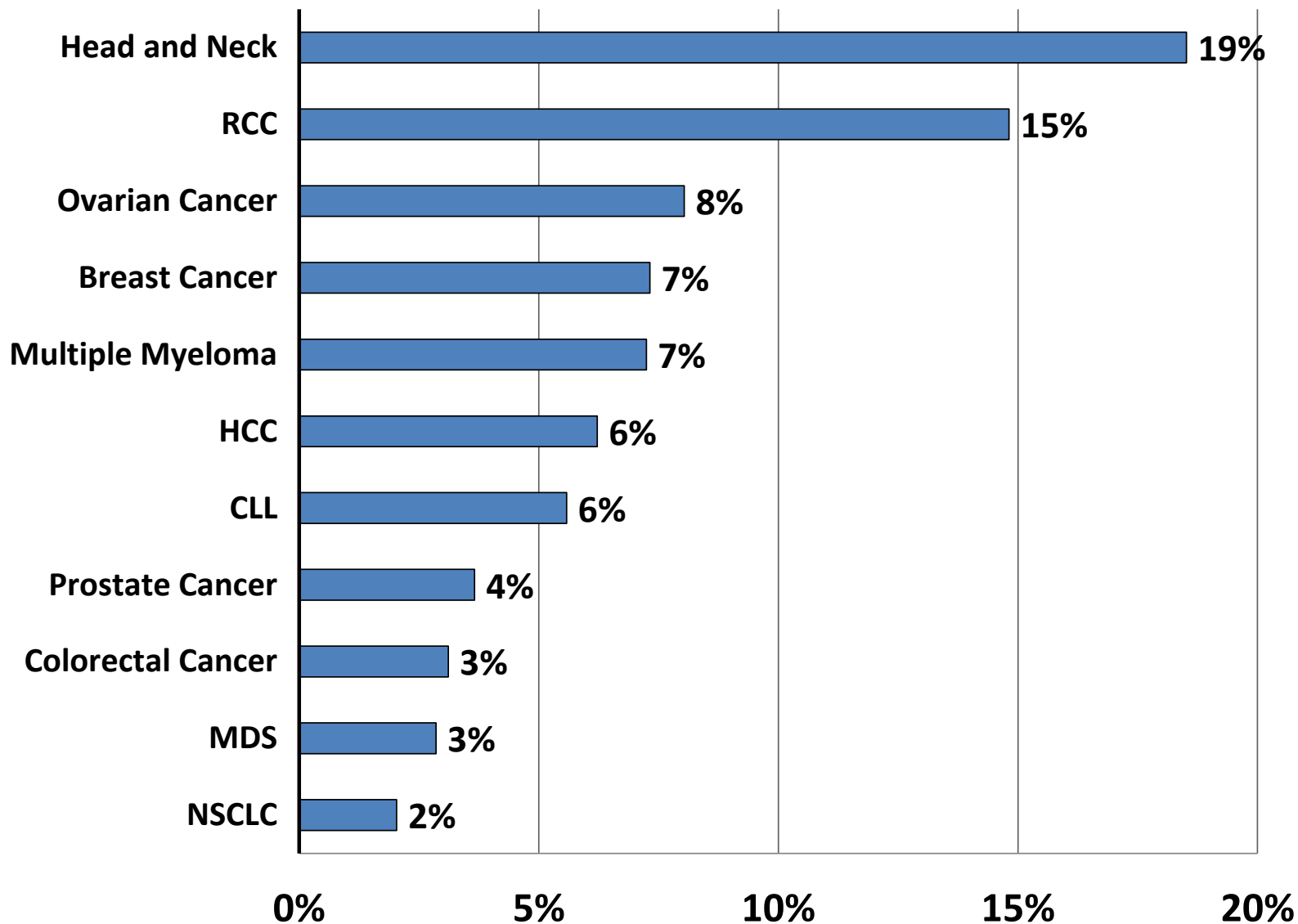
Respiratory

Neurology

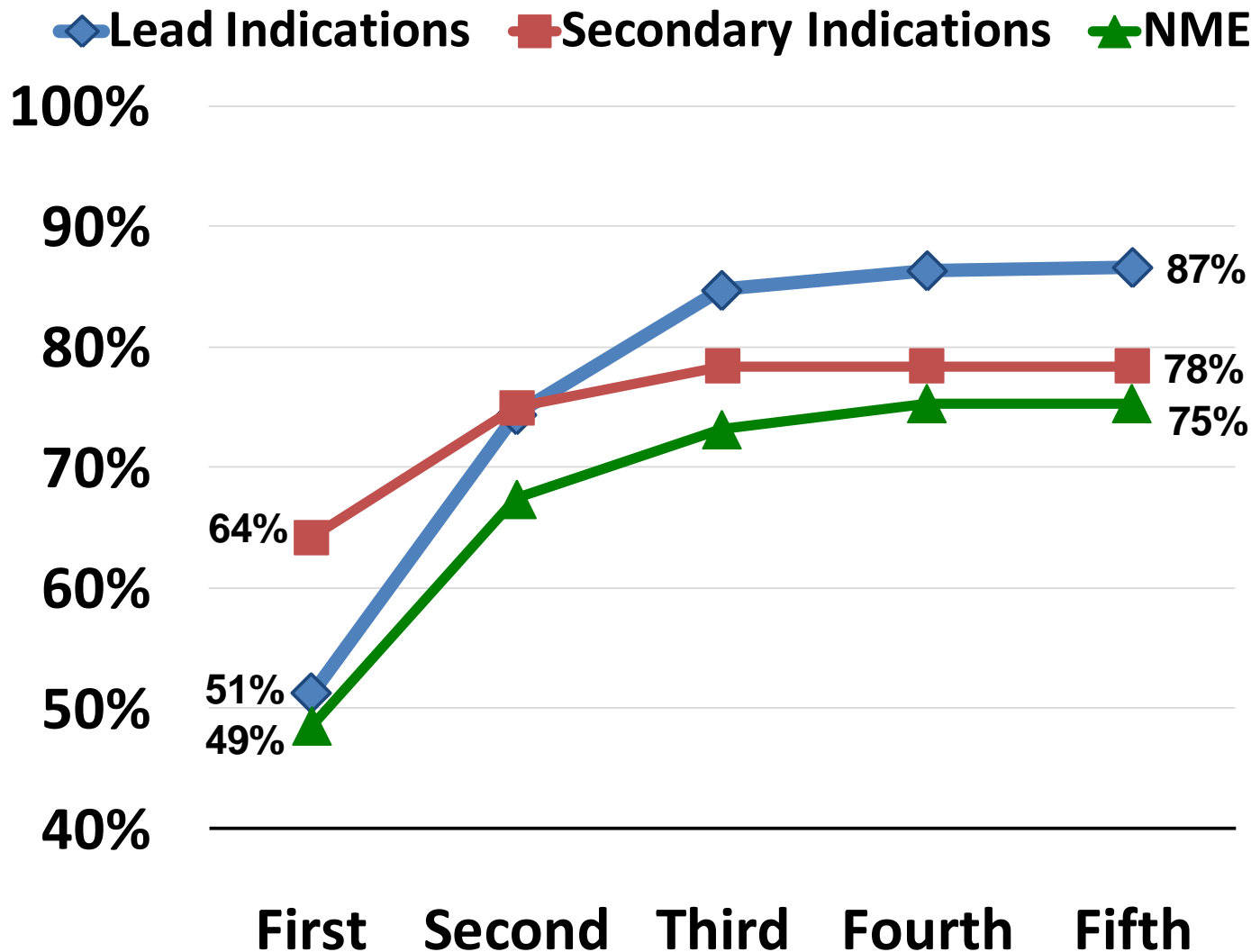
CV

Oncology

OVERALL SUCCESS RATES - ONCOLOGY



“IF AT FIRST YOU DO NOT SUCCEED... TRY, TRY AGAIN”



Trial and Error: Breaking Down Clinical Trial Success Rates

13th ANNUAL BIO CEO INVESTOR CONFERENCE

Tuesday, February 15th
12:00 - 12:55 pm, Jade Room

Moderator:

- David Strupp, Managing Director, Rodman & Renshaw, LLC

Panelists:

- Ted Buckley, PhD, Chief Economist, Bloomberg
- Lawrence T. Friedhoff, MD, PhD, FACP, CEO, Pharmaceutical Special Projects Group, LLC
- Michael Hay, Senior Biotechnology Analyst, Sagient Research Systems
- David Thomas, Director, Industry Research & Analysis, BIO

