Immunotherapy's Wild Ride: From Neglect to Stardom to Pariah – and Now Maybe Phoenix

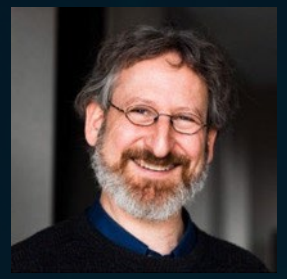
CANCER PROGRESS WEBINAR SERIES

MAY 13, 2025

Lumanity | Cancer Progress

10:30 AM – 12:00 PM

Immunotherapy's Wild Ride: From Neglect to Stardom to Pariah – and Now Maybe Phoenix



Jeffrey Bockham, PhD

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Kaveri Pohlman, PhD, MBA

Managing Director, Clear Street

Mike Curran, PhD

Founder, ImmunoGenesis
Professor, MD Anderson Cancer Center

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Clinical development of immuno-oncology therapeutics

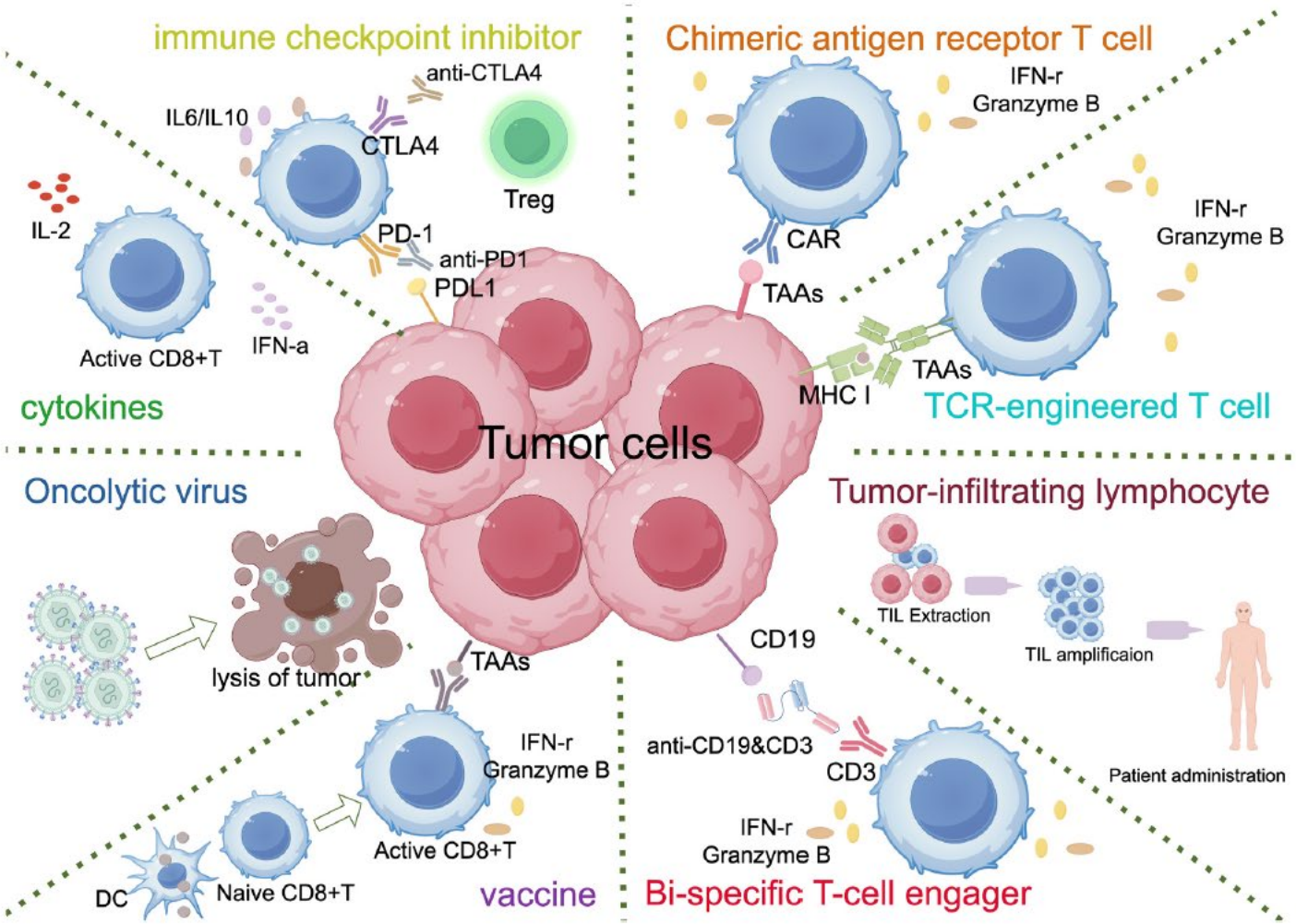

Fig. 1. Schematic diagram of eight classes of immunotherapy agents.

Cancer Lett. 2025 May 1:617:217616. doi: 10.1016/j.canlet.2025.217616

Not a Great Success Rate

A Decade of Combination Trials Failed to Overcome "Cold" Cancers

First-generation base: Development has focused on combinations or bispecifics with first-generation PD-1 inhibitors as the base

Poor results: Success rate for this approach is woeful

Limited reach: First-generation PD-1 inhibitors have limits

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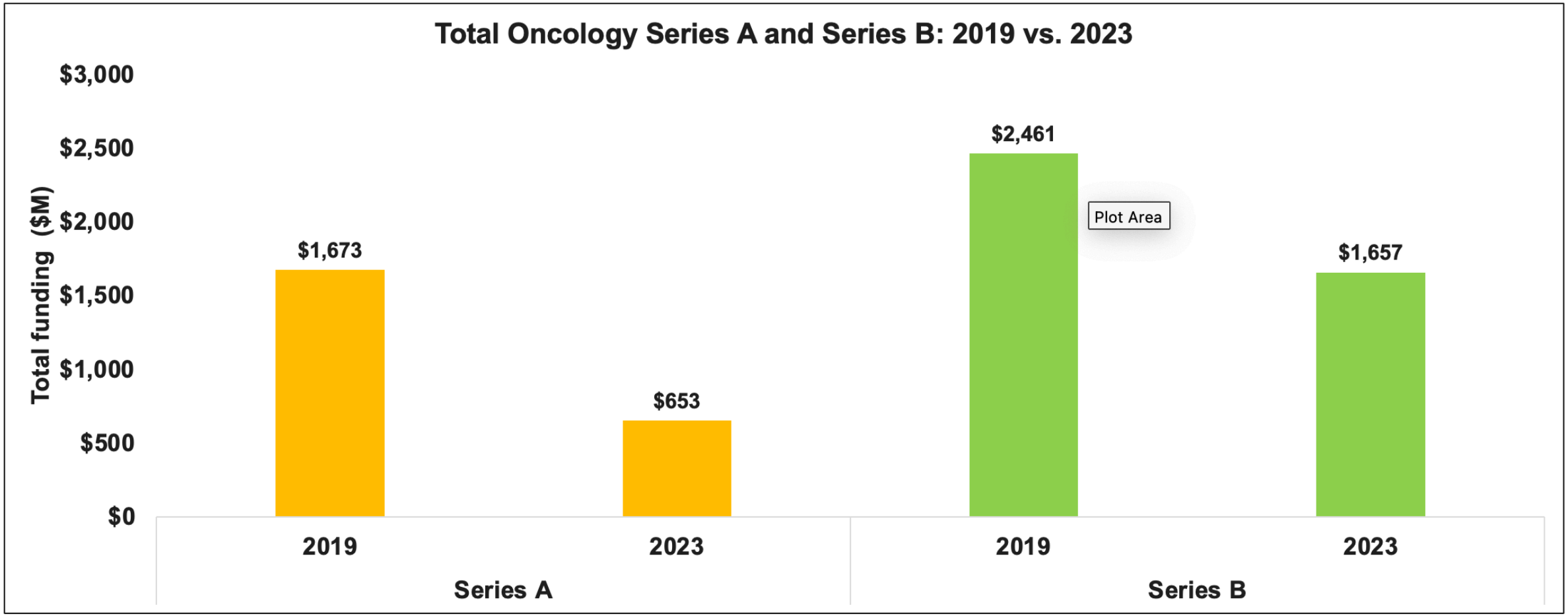
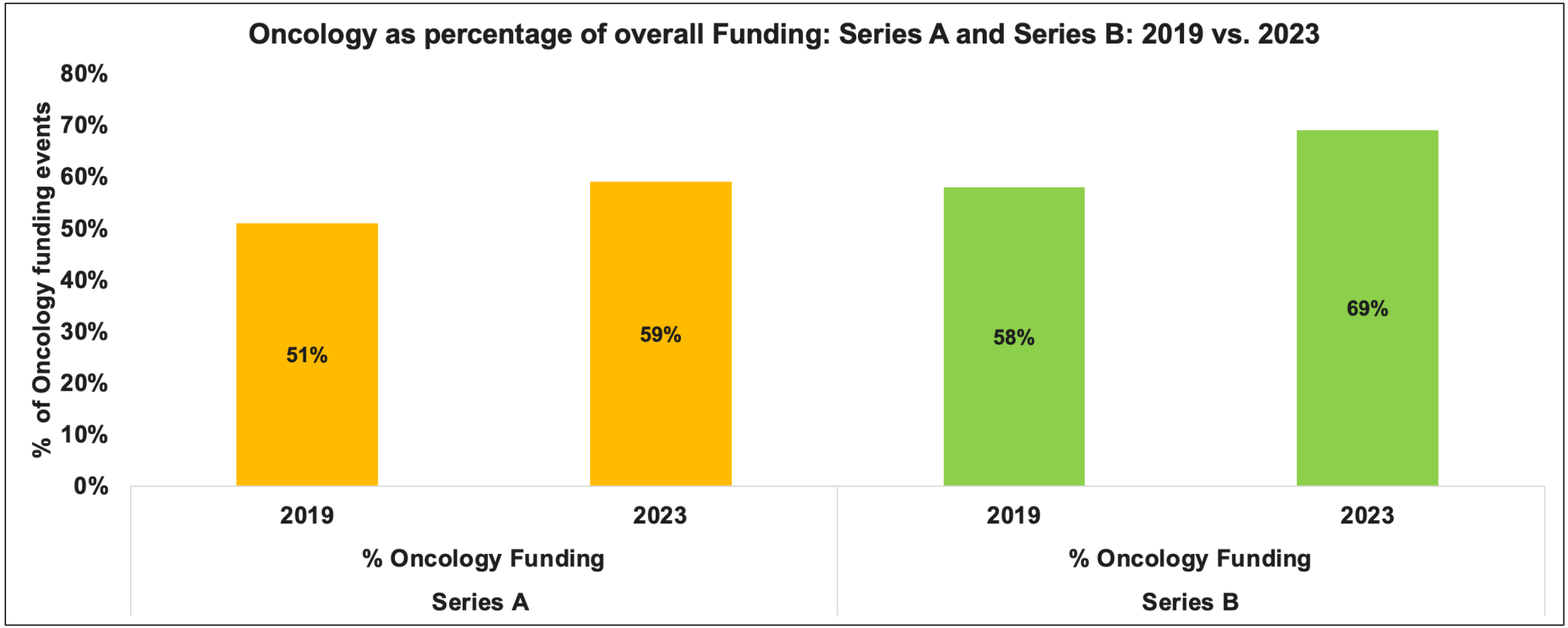
Courtesy of Mike Curran

Oncology series A/B funding dropped from 2019 to 2023



Source: CIBC Analysis; BCIQ – Finance
Note: The graphs include disclosed financings only.

Oncology continues to receives most series A/B funding



Source: CIBC Analysis; BCIQ – Finance

Note: The graphs include disclosed financings only.

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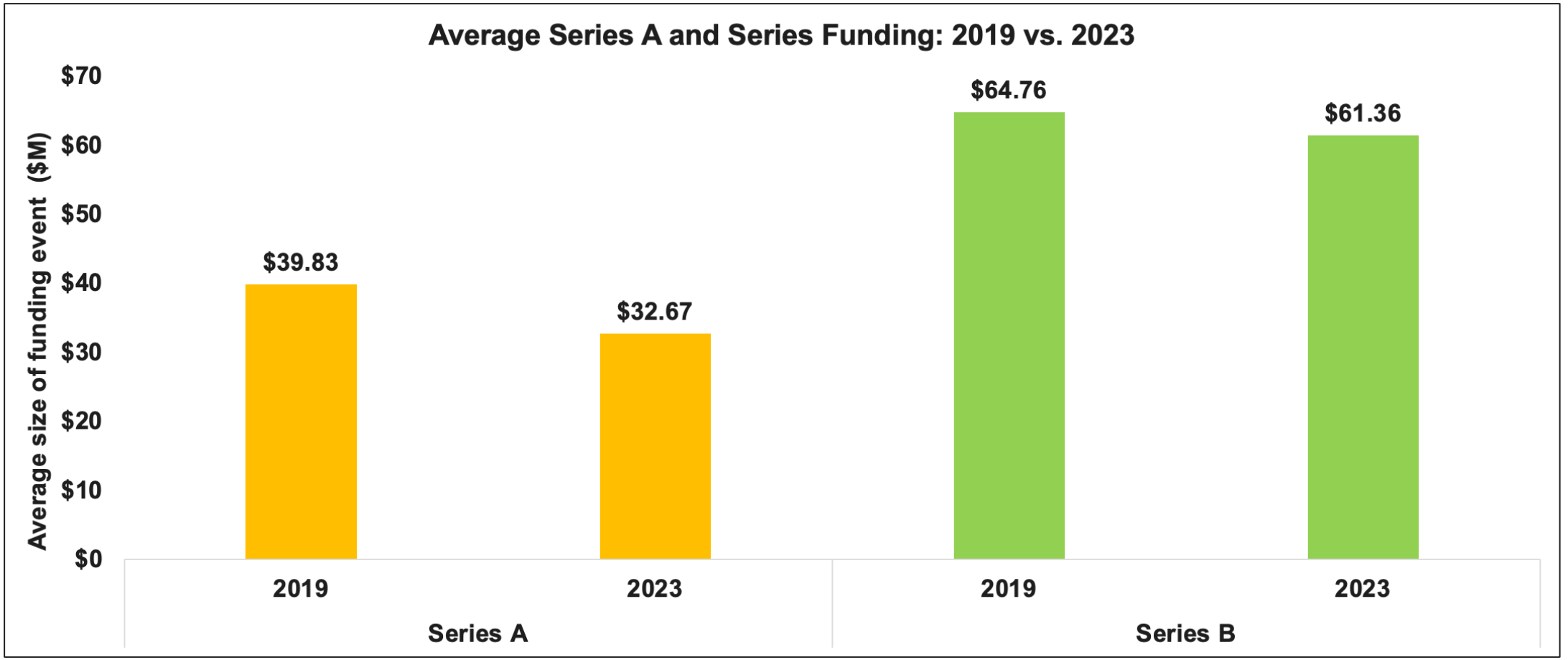
Oncology series A/B funding rounds consistent in size



Source: CIBC Analysis; BCIQ – Finance
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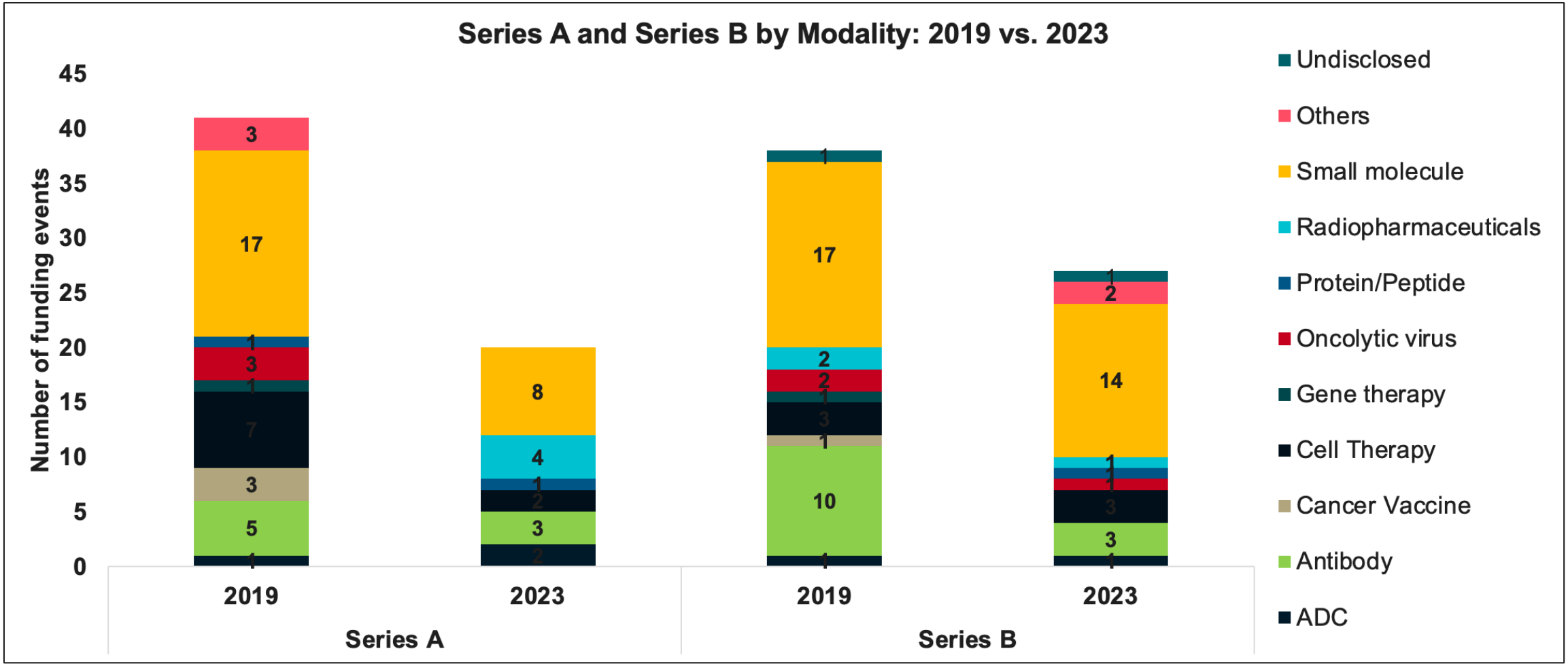
Oncology funding by modality 2019 vs 2023



Source: CIBC Analysis; BCIQ – Finance

Note: The graphs include disclosed financings only

Other Modalities include: Bacteria, Cytokines, Fusion protein, Polymeric micelles; The category Antibody includes monoclonal and/or multispecific antibodies.

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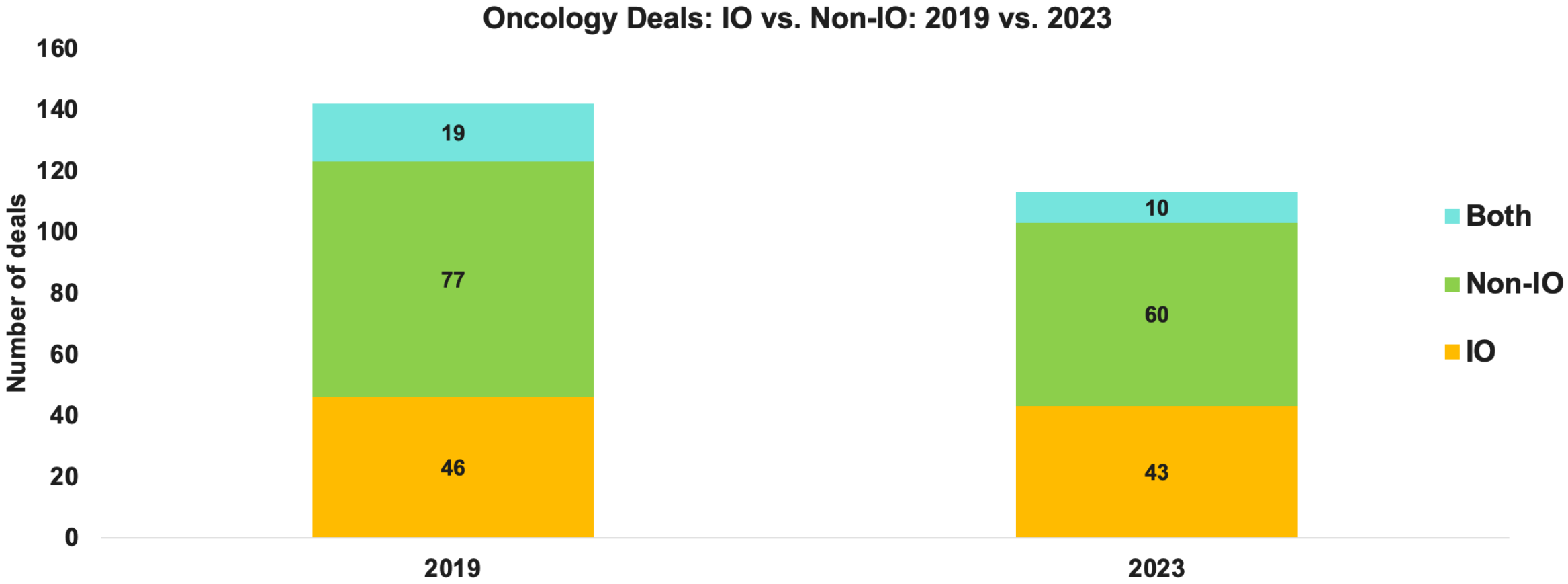
Oncology deal volume declined from 2019 to 2023



Source: CIBC Analysis; BCIQ – Deals;
Note-For 2019-6 deals are excluded which include diagnostics, agents with unknown targets,drug/device combination
For 2023-77 deals are excluded as the targets are undisclosed/diagnostics/biomarkers

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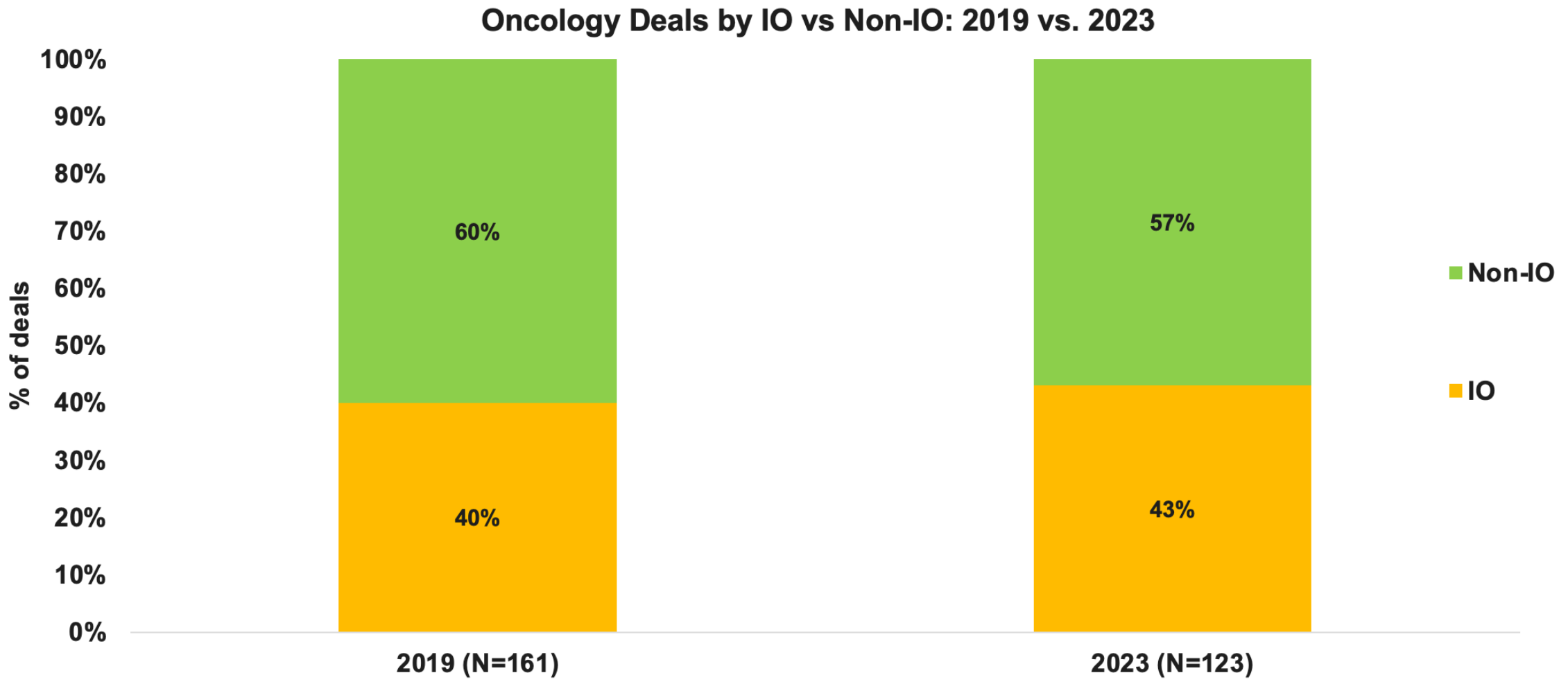
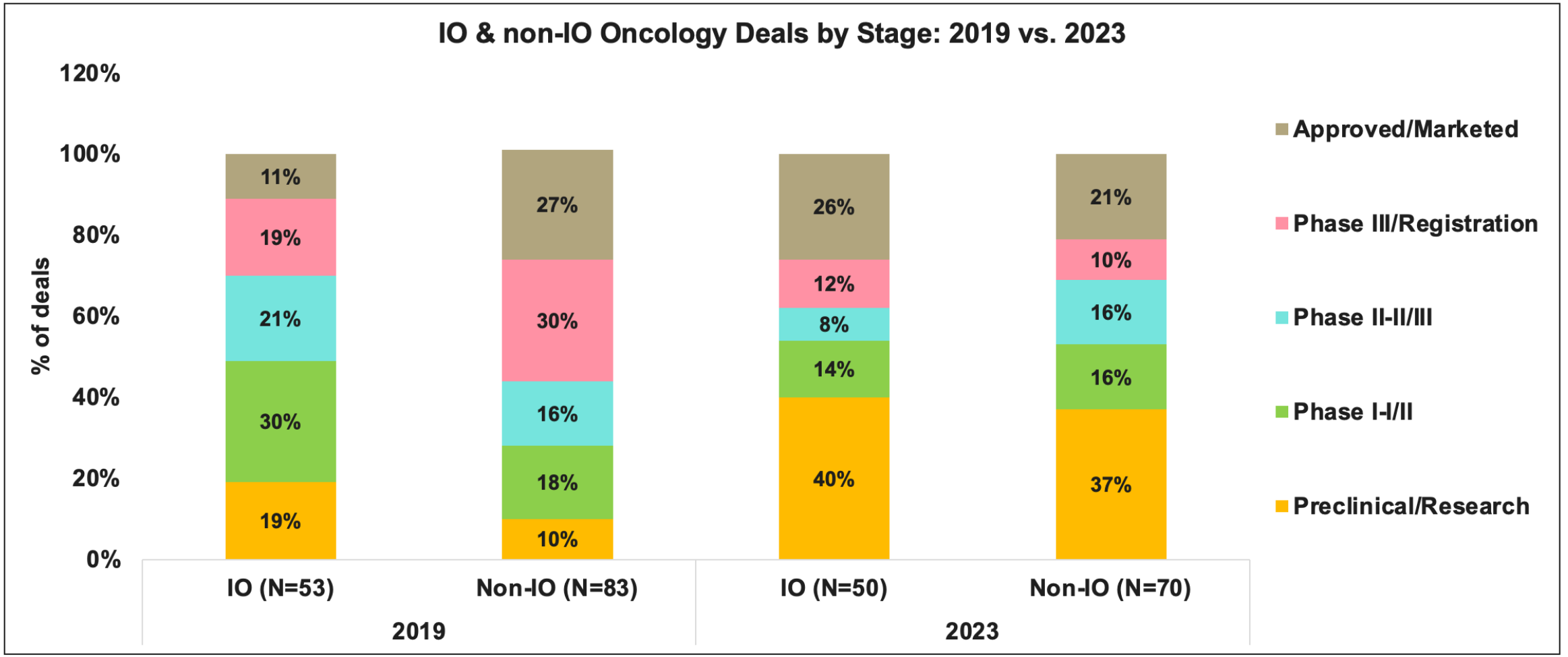
IO deal volume remains proportionate to Non-IO



Source: CIBC Analysis; BCIQ – Deals
Note: The above data is for disclosed deals only.

Increase in pre-clinical/research-focused deals



Source: CIBC Analysis; BCIQ – Deals

Note: The highest stage of development was considered for deals with multiple assets. Note: The above data is for disclosed deals only.

R&D- Research and Development

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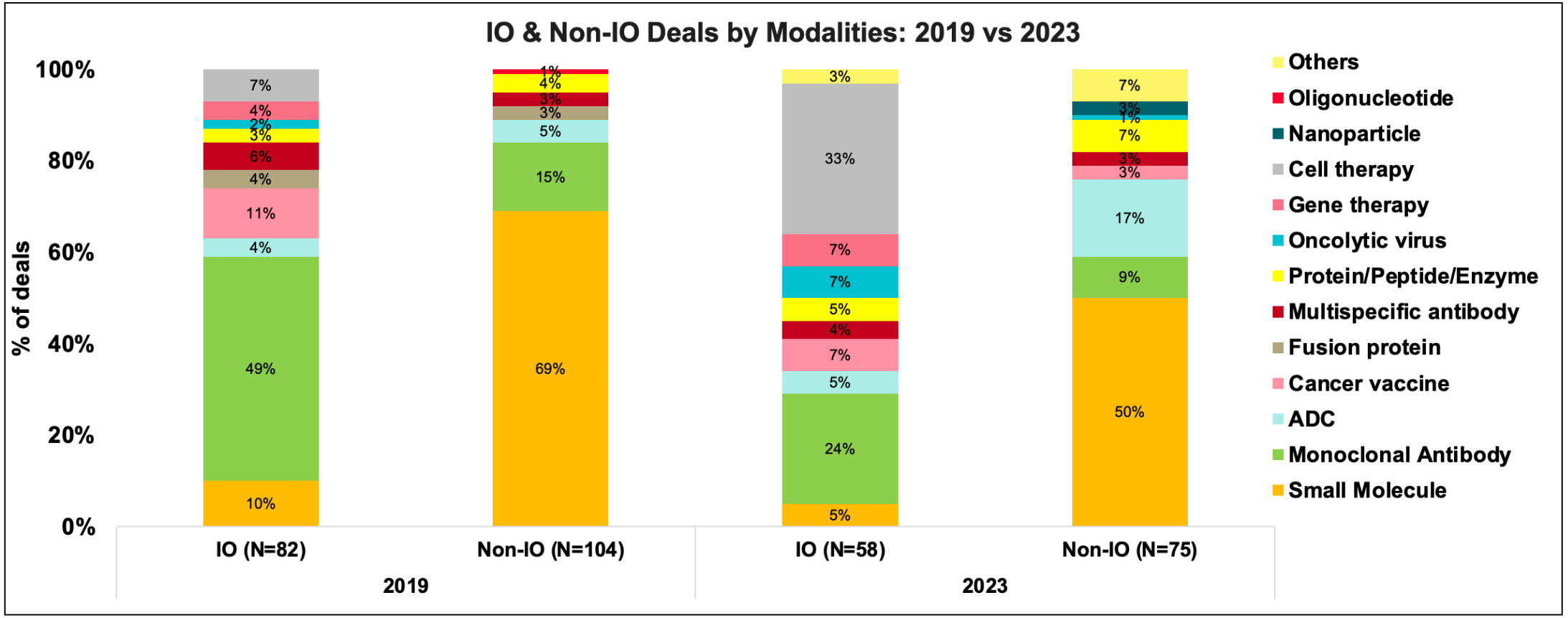
Oncology deal landscape evolution

- **IO:** Less Monoclonal Ab, more Cell Therapy Deals
- **Non-IO:** Dominant Small Molecules, increasing ADC Deals



Source: CIBC Analysis; BCIQ – Deals

Note: Assets with multiple modalities have been counted twice. Note: The above data is for disclosed deals only.

Other modalities include: Adjuvant, Bacteria, Biologics, Fusion protein, Drug/Device combination, Biomarkers and Diagnostics, Nanoparticles and Radiopharmaceuticals

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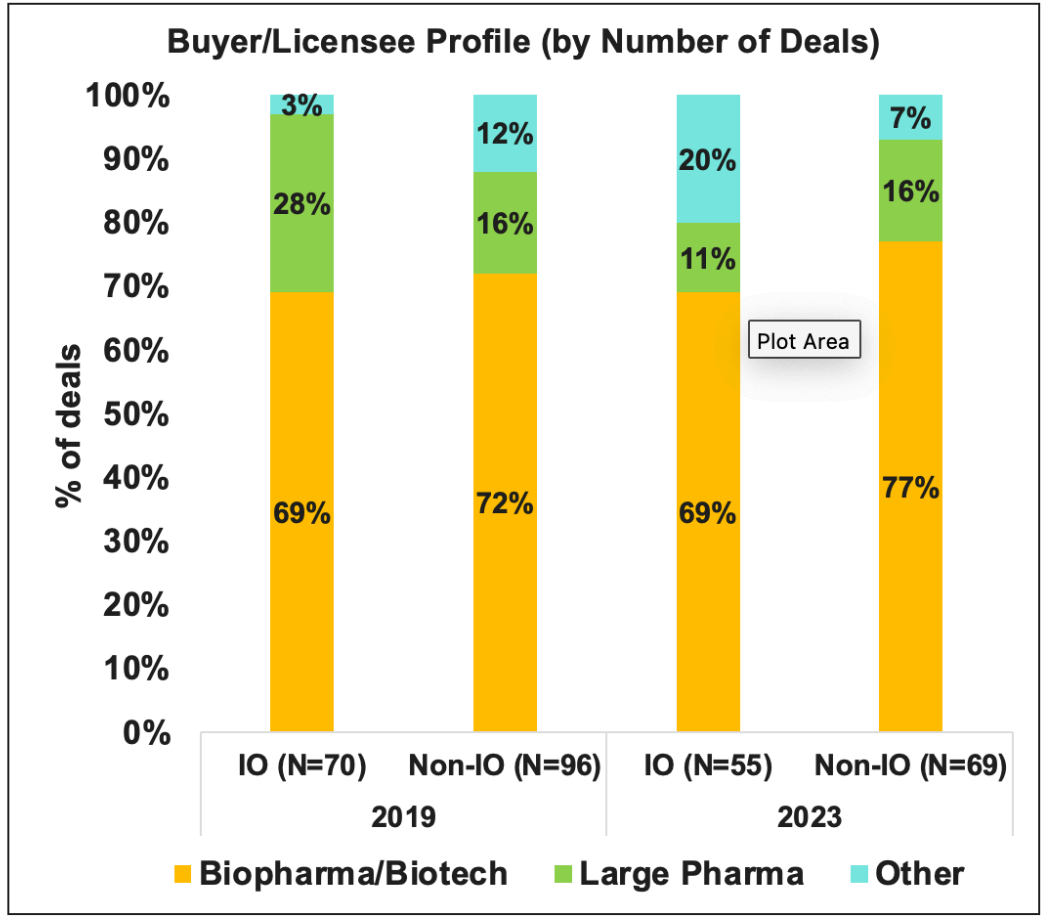
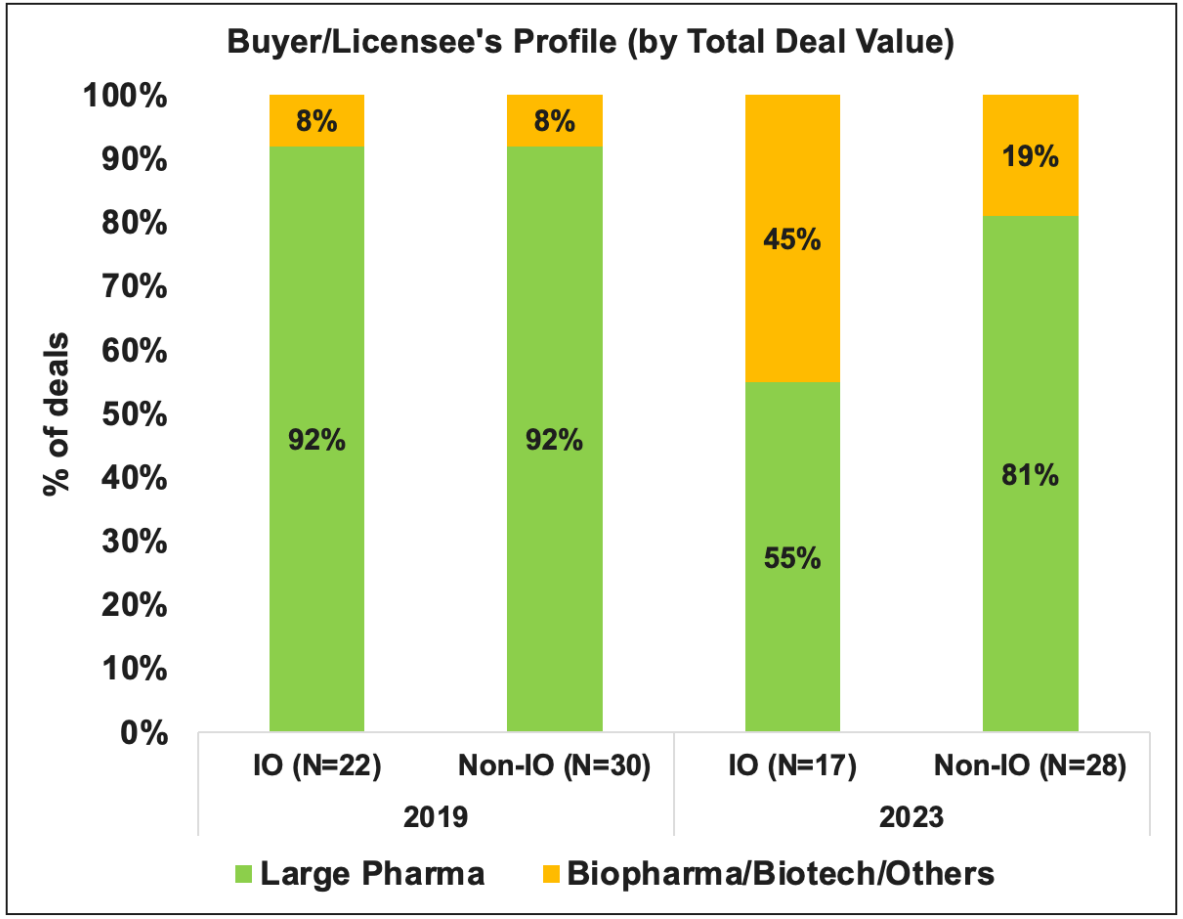
Deal volume is between Biopharma/Biotechs; Deal value rests with large pharma





Source: CIBC Analysis; BCIQ – Deals; **Large Pharmas** - https://www.fiercepharma.com/special-report/top-15-pharma-companies-by-2026-sales

Note: The buyer/licensee profiles are for disclosed deals only.

Others include: Financial, Academic, Tool, Manufacturing and Services, Medical device and diagnostics and Non-Profit Organizations

Biopharma- Biopharmaceutical; Biotech- Biotechnology; Pharma- Pharmaceutical

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Neoadjuvant immune checkpoint therapy: Enabling insights into fundamental human immunology and clinical benefit

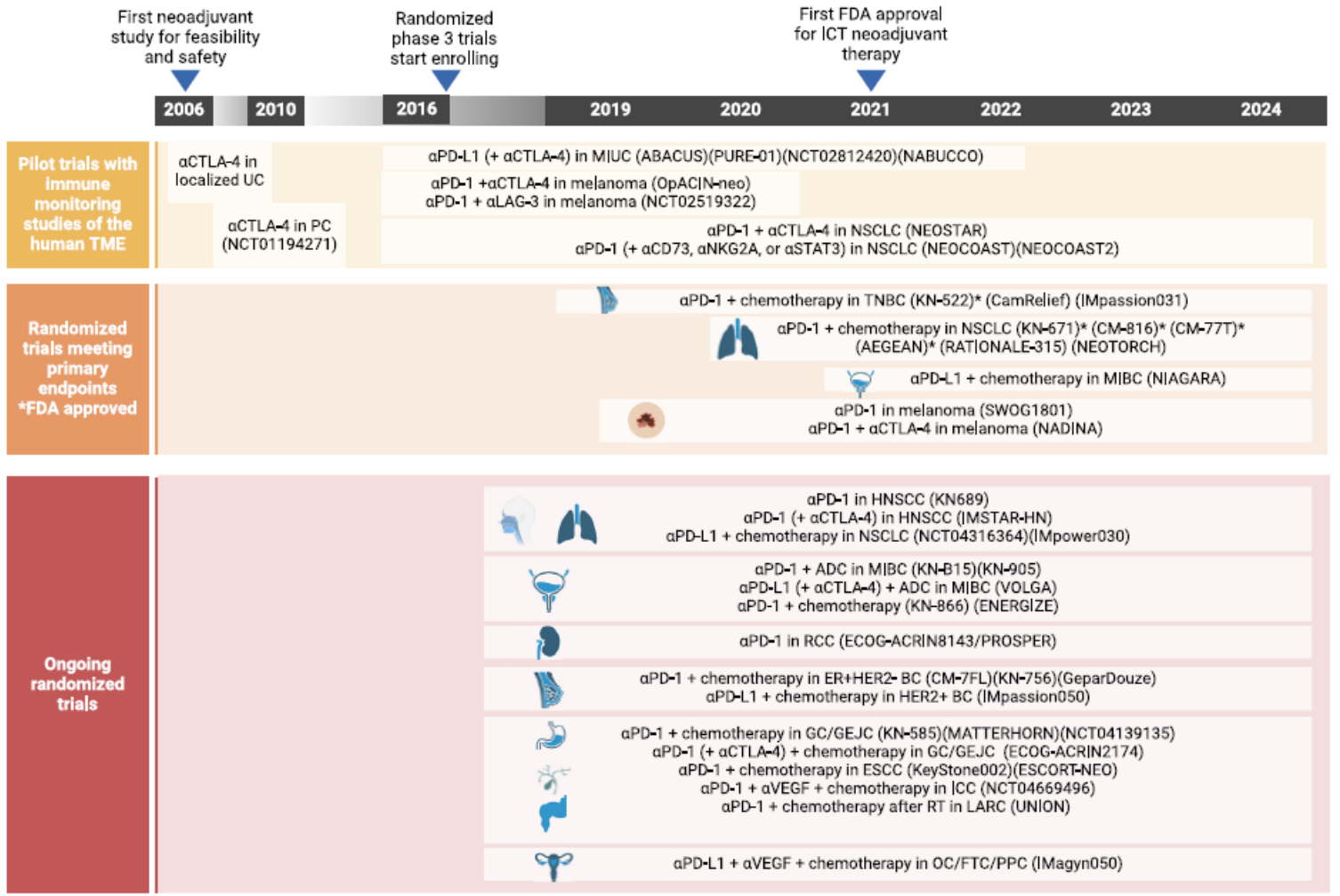

Figure 1. Timeline of key clinical trials and approvals for neoadjuvant ICT

Timeline showing neoadjuvant ICT clinical trials across cancer types and key trials leading to changing clinical practice and clinical approvals. In the yellow box are pilot trials with immune monitoring studies of the human tumor microenvironment. In the orange box are randomized trials meeting primary endpoints. Trials with an asterisk (*) next to them indicate subsequent clinical approval for neoadjuvant ICT in that setting. In the red box are randomized phase 2 or 3 trials that are ongoing. Trials that were discontinued early or had reports of not meeting primary endpoint are not included. The specifics around cancer stage such as TNM staging for inclusion in each trial are omitted. Abbreviations: α, anti; MIBC, muscle invasive bladder cancer; MIUC, muscle invasive urothelial cancer; PC, prostate cancer; NSCLC, non-small cell lung cancer; TNBC, triple negative breast cancer; HNSCC, head and neck squamous cell carcinoma; ADC, antibody drug conjugate; RCC, renal cell carcinoma; ER, estrogen receptor; HER2, human epidermal receptor-2; BC, breast cancer; GC, gastric cancer; GEJC, gastro-esophageal junction cancer; ESCC, esophageal squamous cell carcinoma; ICC, intrahepatic cholangiocarcinoma; LARC, locally advance rectal cancer; OC, ovarian cancer; FTC, fallopian tube cancer; PPC, primary peritoneal cancer; UC, urothelial cancer. See studies that have published the results.[2,20,24,26,32–49] Clinicaltrials.gov for unpublished/ongoing trials: NCT05061550, NCT04379635, NCT03765918, NCT03700905, NCT04316364, NCT03456063, NCT04700124, NCT03924895, NCT04960709, NCT03924856, NCT03661320, NCT03055013, NCT04109066, NCT03725059, NCT03281954, NCT03221426, NCT04592913, NCT04139135, NCT03604991, NCT04807673, NCT04669496, and NCT04928807.

Cancer Cell 2025 Apr 14;43(4):623-640. doi: 10.1016/j.ccell.2025.03.005

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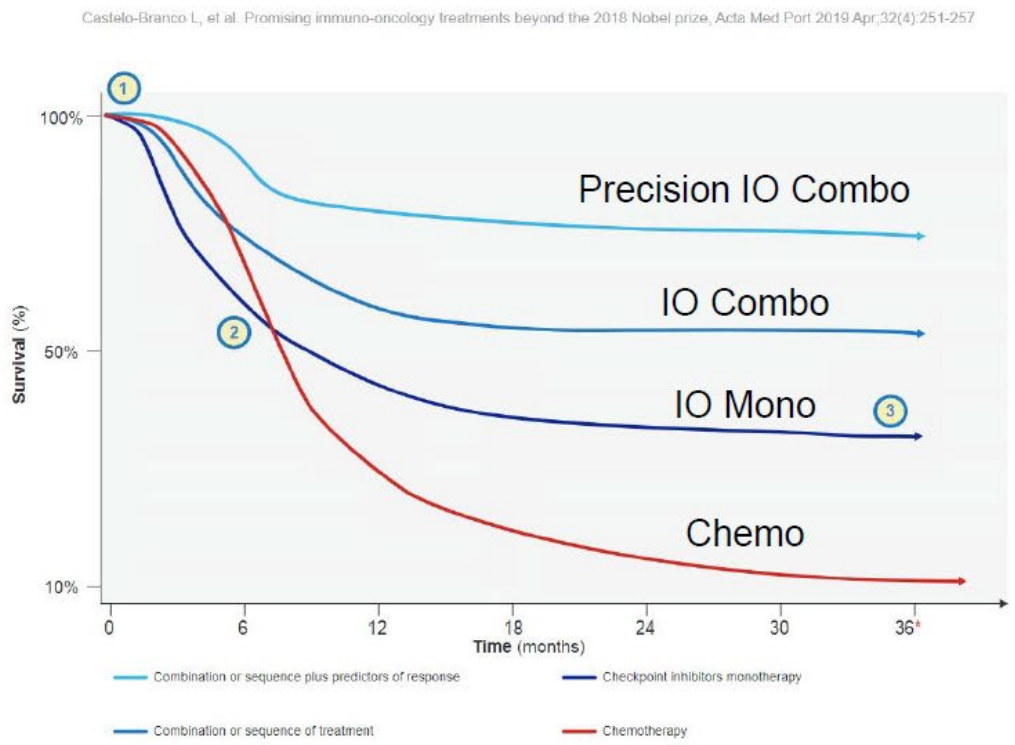
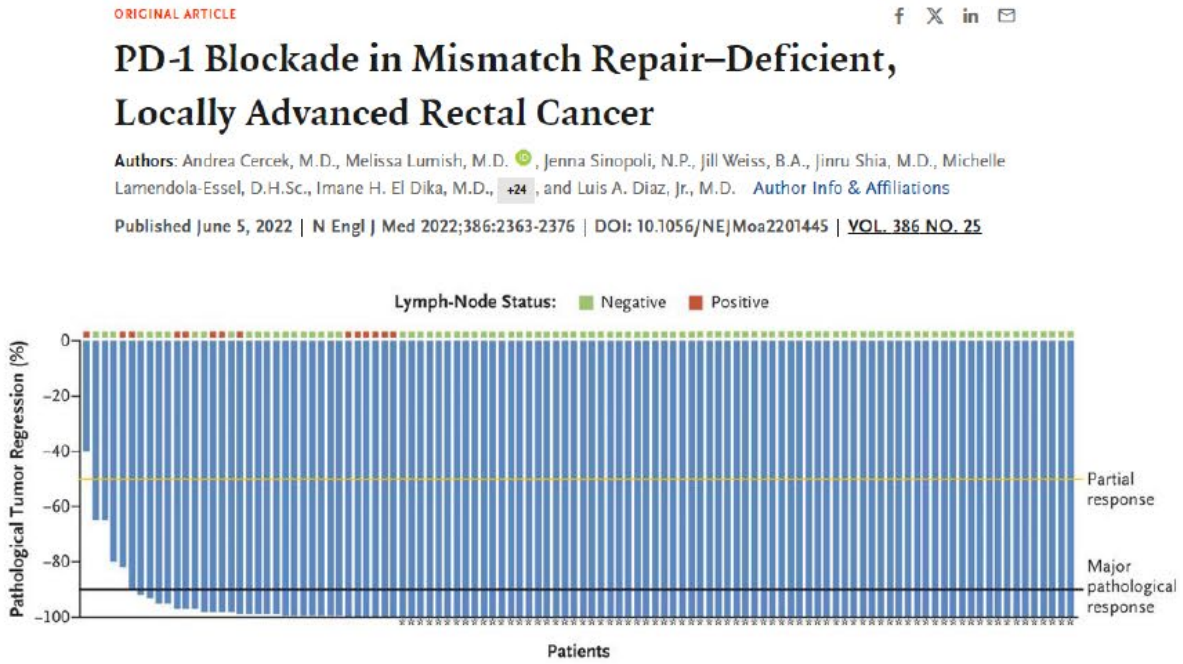
Lessons from the past decade may bring enlightenment

After a Decade of Empirical Combo Failures – Rational Success in Sight?





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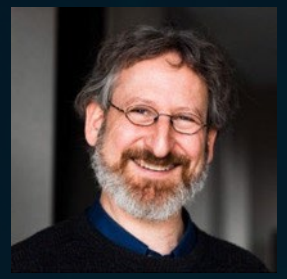

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Thank you for attending!

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