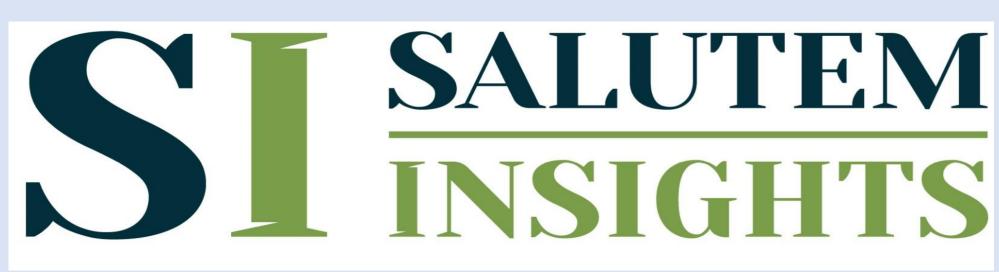
45%, 77

# Insights into the Oncology and Allied Digital Health Landscape on the Island of Ireland: Implications for Policy and Practice

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# **BACKGROUND**

The island of Ireland is a key centre for life and health sciences, with significant employment in oncology and allied digital health. Despite this, limited data exists on the landscape of companies in these sectors, highlighting the need for comprehensive information and strategies to maximise growth potential.

## **OBJECTIVE**

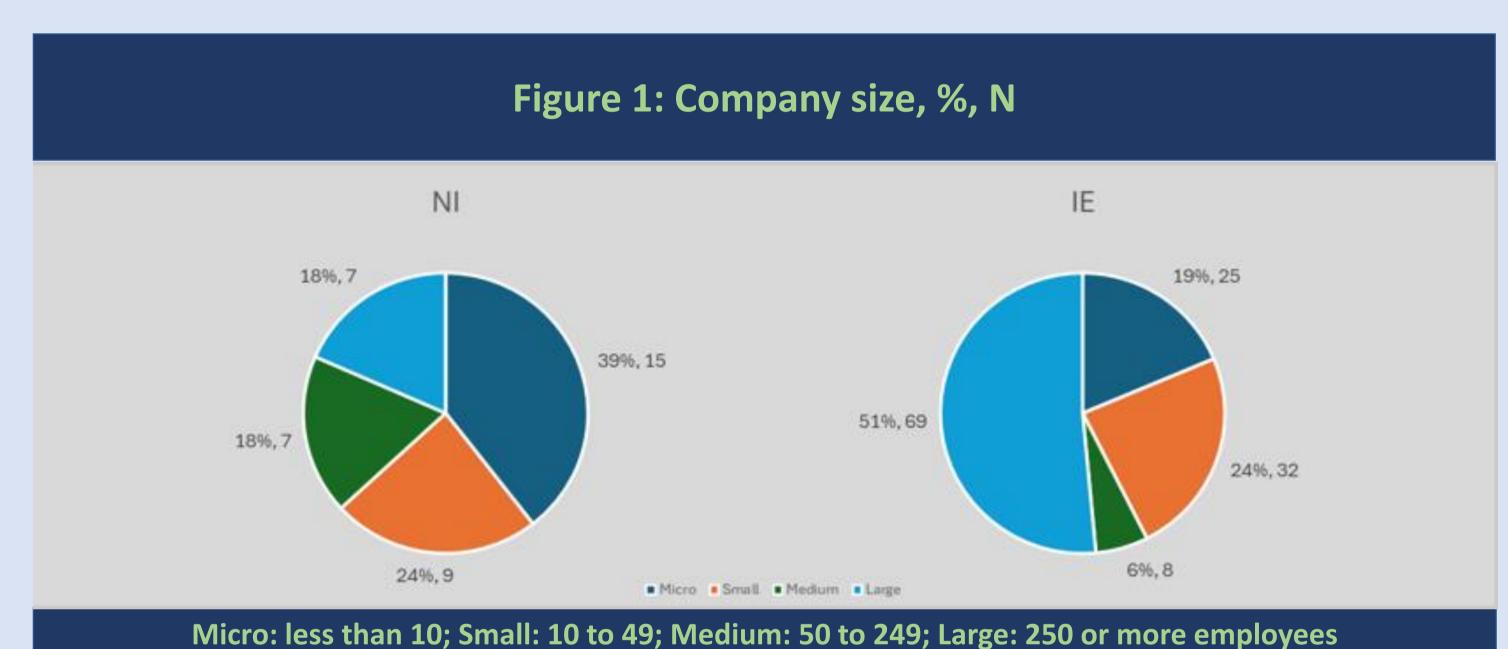
This poster presents findings from a comprehensive analysis of the oncology and allied digital health landscape on the island of Ireland.

# **METHODS**

Our search strategy aimed to identify all oncology and allied digital health companies and the wider ecosystem across the island of Ireland using 14 different directories. This comprehensive approach led to the compilation of two databases for Northern Ireland (NI) and Ireland (IE), filtered to include relevant companies while also identifying oncology support ecosystems (oncology hospitals, academic and research centres, and cancer charities).

#### **RESULTS**

A total of 172 companies were identified, with NI hosting 38 and IE hosting 134 entities. Analysis by company size revealed a dominance of larger companies in IE and micro-enterprises in NI (Figure 1). The wider ecosystem comprised hospitals, research centres, academic institutions, and research charities, with IE exhibiting a higher concentration of research centres supported by Science Foundation Ireland. Geolocation analysis revealed clustering of companies around major cities, particularly in proximity to academic centres (Figure 2). Spin-out companies from universities displayed a higher propensity for scaling up in NI compared to IE (Figure 3). The distribution of products and services varied, with NI emphasising diagnostics and IE focusing more on drug manufacturing and digital solutions (Figure 4). Furthermore, the study highlighted a notable presence of multinational companies, particularly from the US, operating in Ireland (Figure 5). Company age analysis indicated a surge in indigenous company growth over the last four decades, attributed to technological advancements such as the world wide web and the Human Genome Project (Figure 6).



IE: Ireland; N: number; NI: Northen Ireland

Figure 2: Distributional spread of companies offering oncology products and services

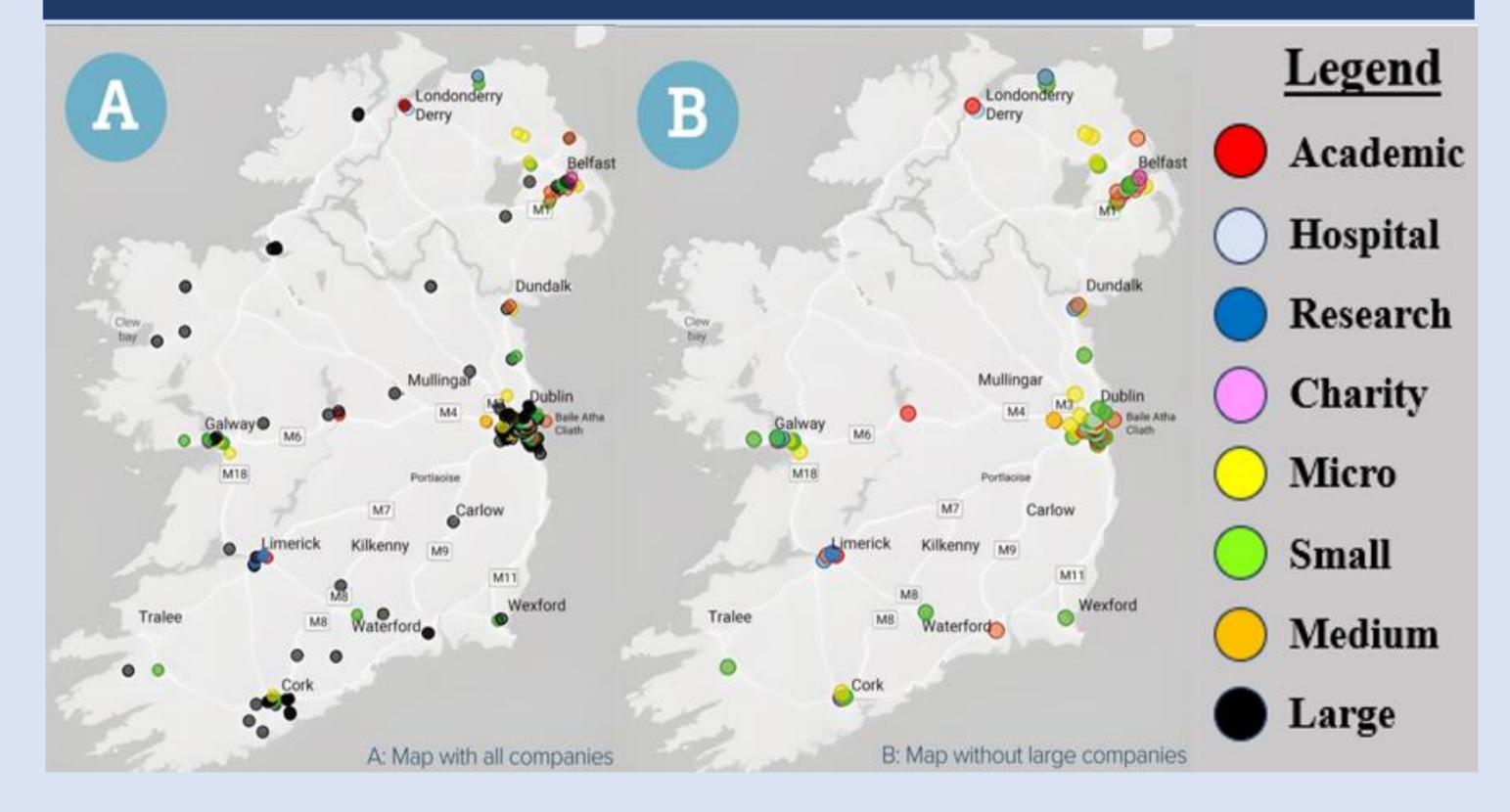
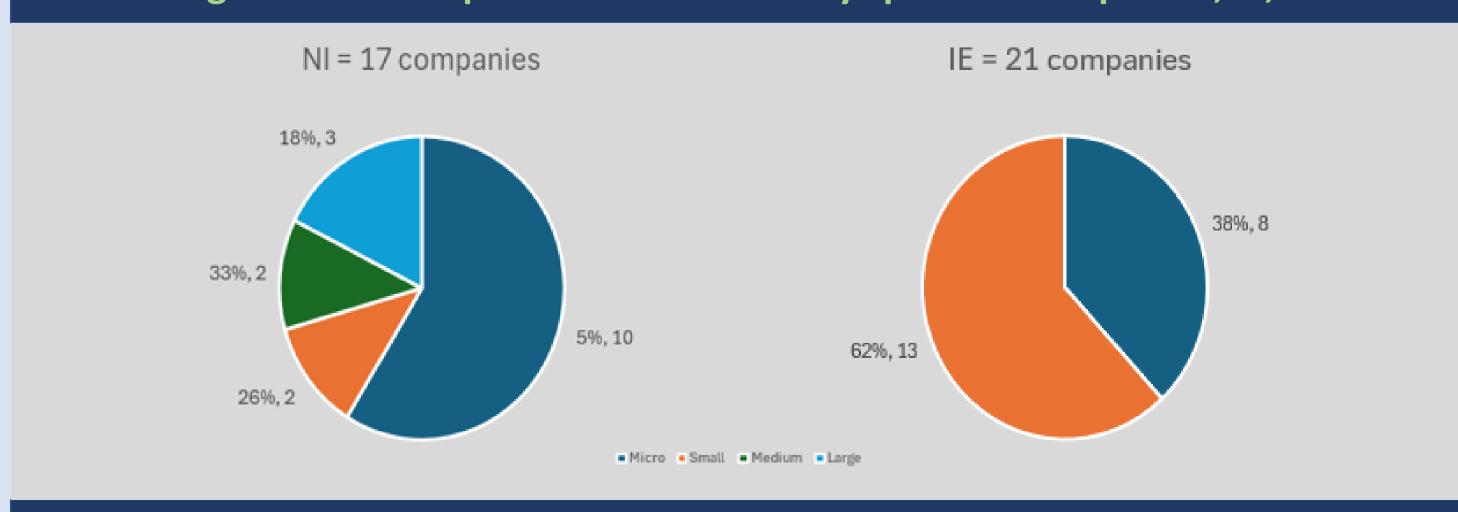


Figure 3: Scale up success of university spin-out companies, %, N



5 of 17 university spin-outs in NI scaled up to medium or large firm class, while none in IE achieved this IE: Ireland; N: Number; NI: Northern Ireland

# Figure 4: Oncology products and services by segment, %, N NI 18%; 7 29%, 50 29%, 50 6%, 10

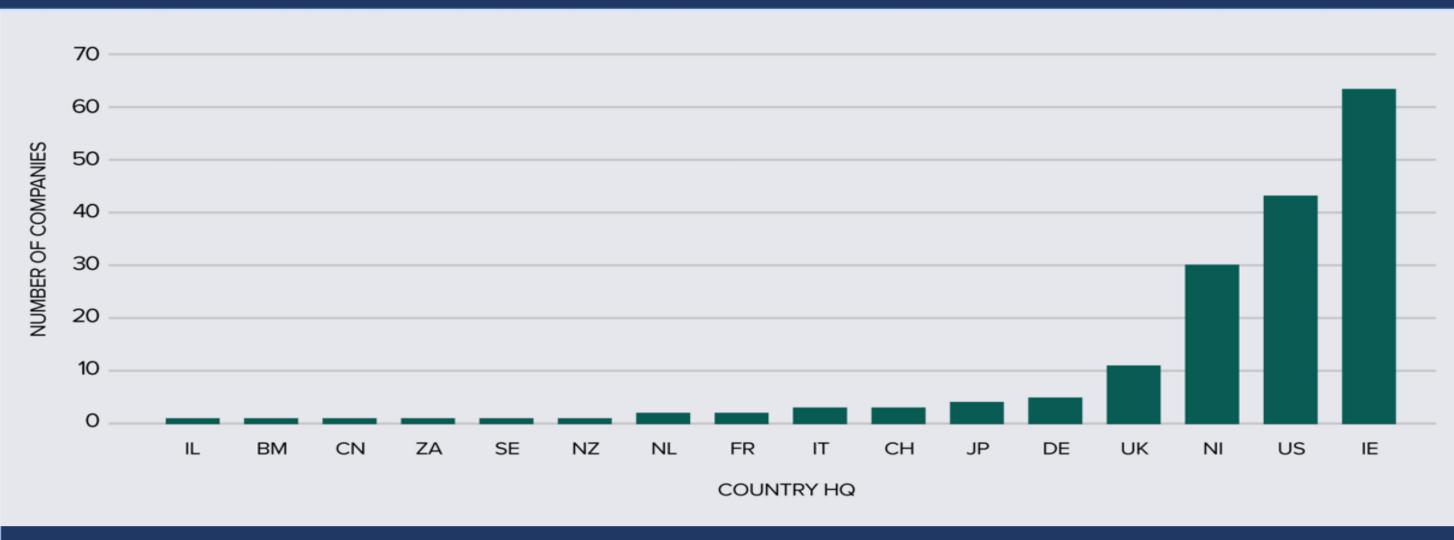
The total count of individual oncology and allied digital health companies may exceed 172 due to potential double counting.

IE: Ireland; N: Number; NI: Northen Ireland

■ Device
 ■ Diagnostic
 ■ Digital
 ■ Discovery
 ■ Drug

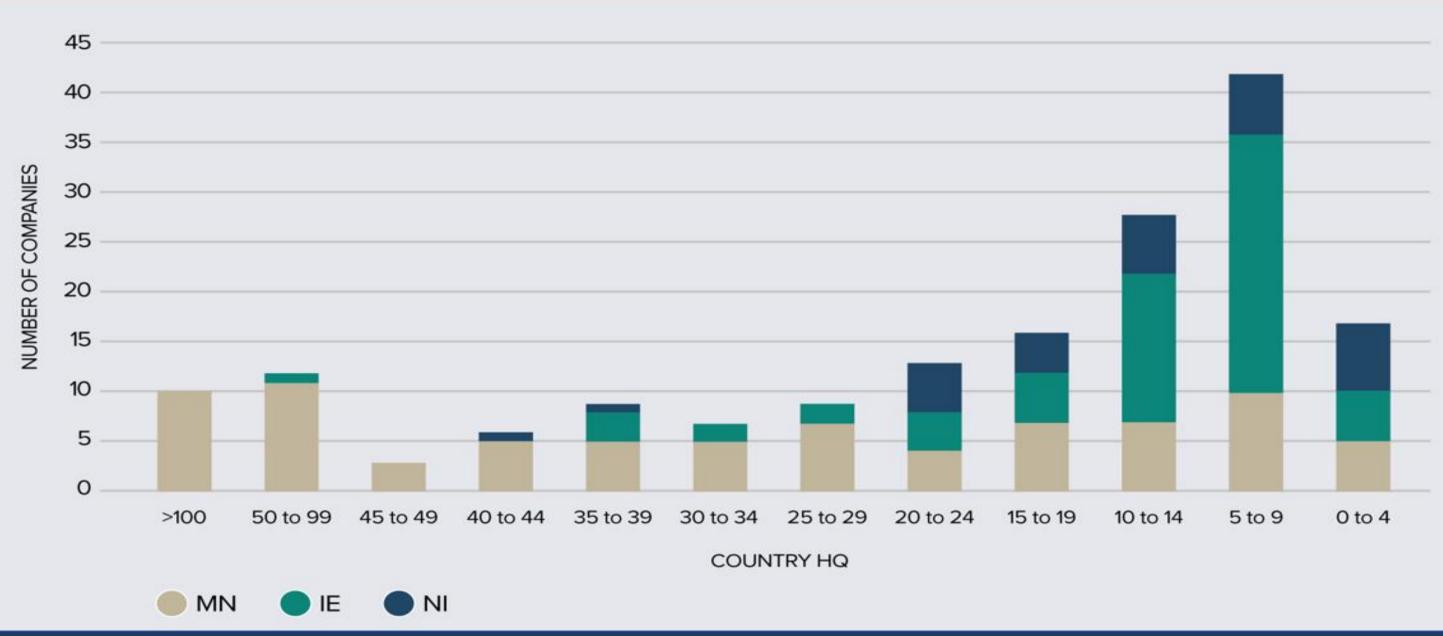
18%; 7

#### Figure 5: Global distribution of oncology and allied digital health company HQs



BM: Bermuda; CH: Switzerland; CN: China; DE: Germany; FR: France; IE: Ireland; IL: Israel; IT: Italy; JP: Japan; NI: Northern Ireland; NZ: New Zealand; SE: Sweden; UK: United Kingdom; US: United States; ZA: South Africa

#### Figure 6: Age of companies offering oncology and allied digital health



HQ: Headquarters; IE: Ireland; MN: Multinational; NI: Northern Ireland

### CONCLUSION

This research highlights a thriving oncology and digital health sector on the island of Ireland. NI has a robust indigenous sector focused on diagnostics and digital enterprises, with a higher proportion of university spin-outs. IE, on the other hand, is home to large multinationals concentrating on drug manufacturing and digital health, supported by a strong research ecosystem. NI also has an edge in scaling university spin-outs to larger enterprises compared to IE.

#### Policy Implications for Oncology and Digital Health in IE and NI include:

- Cross-Border Collaboration: An all-island oncology cluster could enhance research and clinical advances, promoting shared resources and expertise across IE and NI.
- Clinical Infrastructure Gaps: Limited early-phase trial sites, fragmented oncology services, and a lack of specialised clinical trial centres for Phase I research hinder high-complexity studies and the demand for experimental cancer therapies.
- Critical Gaps in Digital Health Infrastructure Gaps: The absence of a national Electronic Health Records (EHR) system in IE and limited patient data access in NI create barriers to a unified digital health infrastructure for cancer patients. Without shared EHRs, health data remains siloed, complicating patient tracking and care across facilities.
- **University Spin-Outs:** Scaling potential for spin-outs shows the need for policies linking academia and industry, supporting the transition from research to commercial success.
- Region-Specific R&D Investment: NI's diagnostics focus and IE's emphasis on digital health and drug development suggest policies could be regionally tailored to strengthen local specialisations.
- **Growth of Indigenous Firms:** Local firms face challenges in accessing growth capital and partnerships, indicating a need for policies supporting indigenous innovation.
- Workforce Development: Growing demand for skills in digital health and data science highlights the need for targeted training and education initiatives to sustain talent pipelines.
- **Global Leadership:** Aspirations to build international partnerships and elevate global standing in oncology and digital health call for policies enhancing the region's profile. Robust global networks could position IE and NI as leaders in these fields.

# REFERENCE

Raymond Henderson, Naoise O'Flatharta, Keith Patterson, & Sandra Redmond. (2024). Landscape Review and Economic Potential of the Oncology and Allied Digital Health Sector on the Island of Ireland. Zenodo.

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