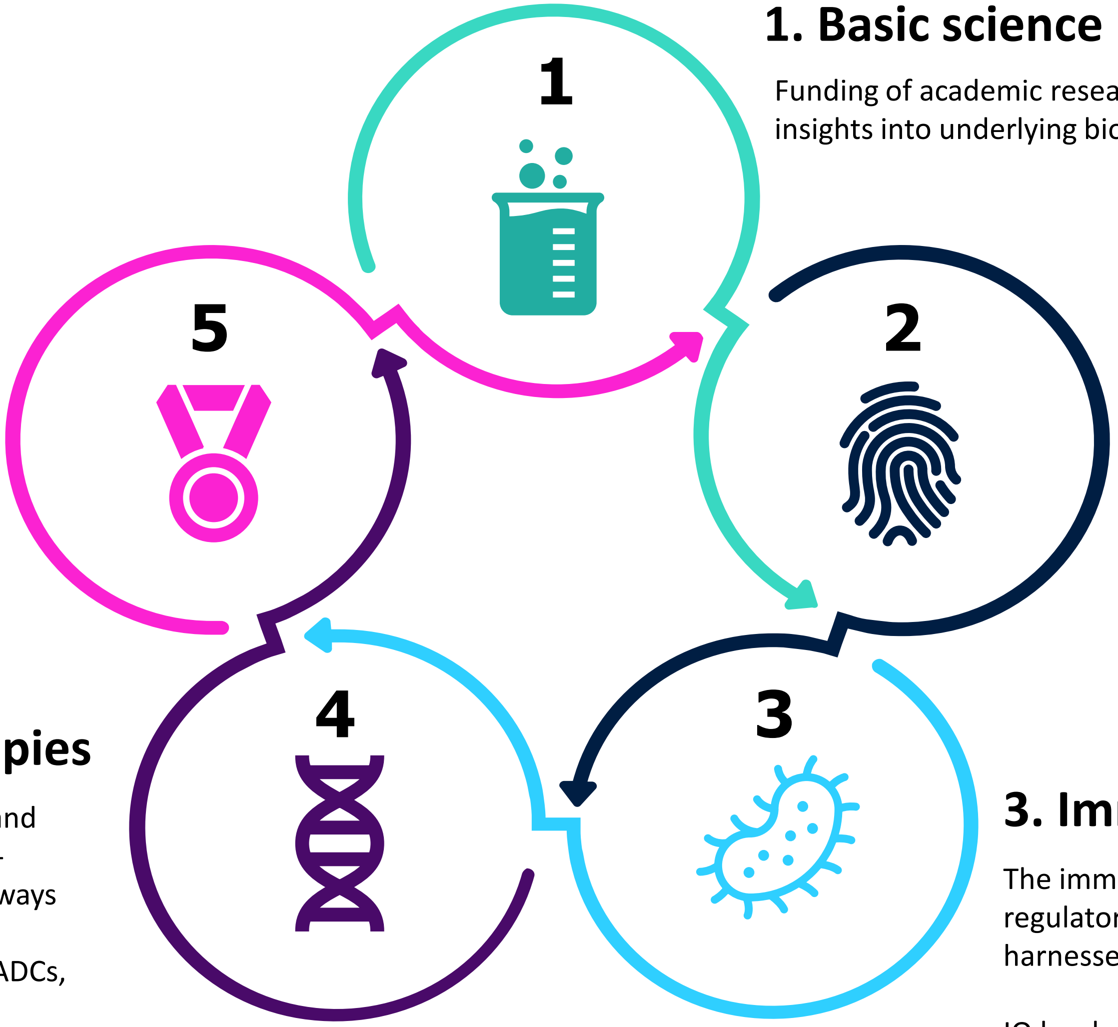
Key Trends in Global vs Swedish and Danish Oncology Markets

A summary view of the clinical and commercial trends in oncology and their implications

By: Millie Gray and Ellie Davenport

Key Value Drivers in Global Oncology Market



1. Basic science

Funding of academic research has grown tremendously, unlocking new insights into underlying biological mechanisms for cancer

2. Precision oncology

Cancer types are increasingly defined by genomic signature, as identified through tumor sequencing

This informs disease mechanisms for cancer and guides the development and selection of novel targeted treatments

3. Immuno-oncology

The immune system is now understood as an essential regulator of tumor growth, and one that can be harnessed using therapeutics

IO has become the fourth pillar of cancer treatment

4. Advanced therapies

Advances in designing antibodies, cell therapies and even small molecule improvements allow cancer-related targets to be drugged in new and potent ways

Novel drug classes include bispecific antibodies, ADCs, CAR-Ts, mRNA vaccines, PROTACs

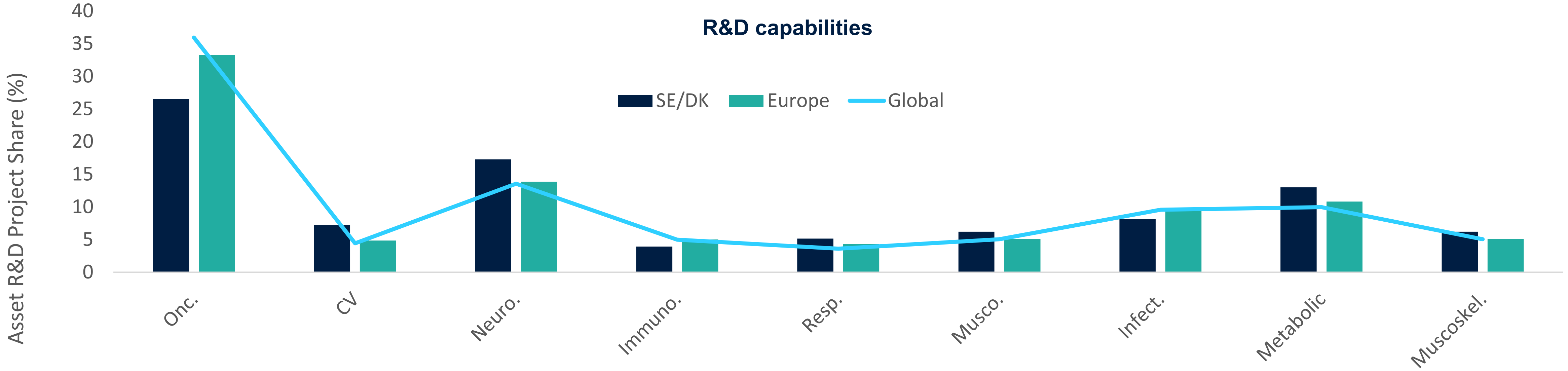
5. Treatment advances

The last decade has seen huge improvements in the standard of care across a range of tumor types

Prominent examples include Keytruda, Tagrisso and Darzalex

Swedish-Danish Biopharma Landscape

Oncology accounts for 27% of Swedish-Danish R&D projects; 20% of Europe's oncology R&D



TA focus

- Swedish-Danish R&D mostly aligns with broader industry trends; although **oncology trails global and European development**
- 20% of Europe's oncology R&D comes from projects within Sweden and Denmark

Companies

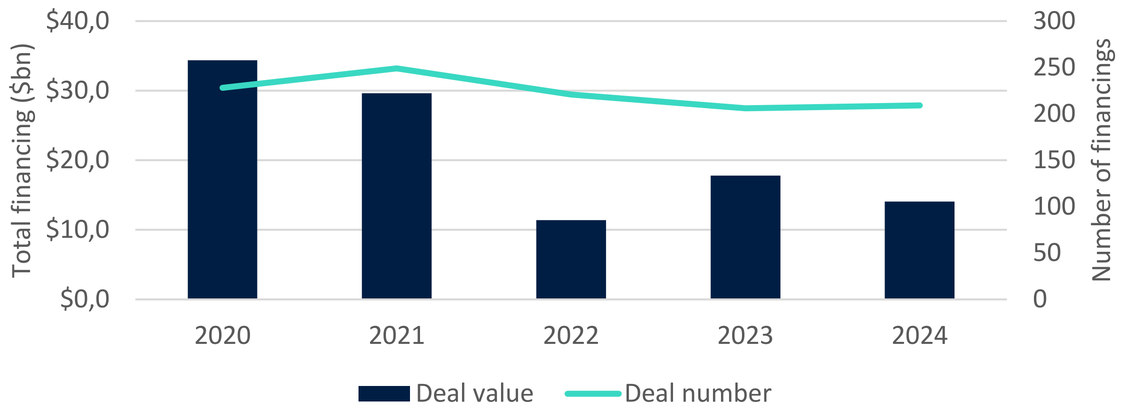
- **More Swedish-Danish** companies **are listed** compared to global trends - **67%** of Swedish-Danish HQ companies are **privately owned**, compared to 87% and 82% in Europe and worldwide, respectively
- **Sweden and Denmark** have a **larger share of smaller cap companies** - **78** Swedish-Danish HQ companies are **nano cap; 1 is large cap – Novo Nordisk**
- 5 European and 34 RoW HQ companies are large cap, respectively

Source: Evaluate Pharma, Pharmaprojects [Accessed February 2025]

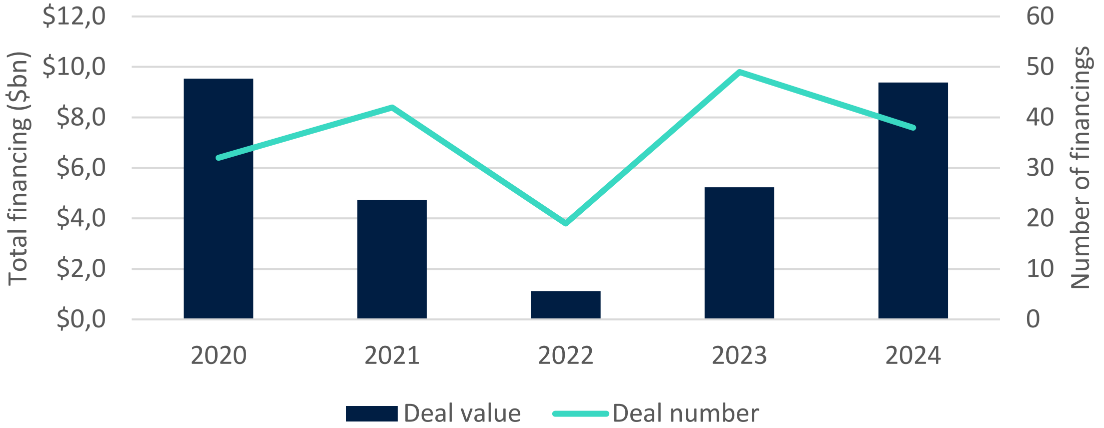
Swedish-Danish Oncology Financing Activity

Swedish-Danish financing activity fluctuated more compared to European trends; 30% of SE/DK financing activity was in oncology-focused companies

European financing

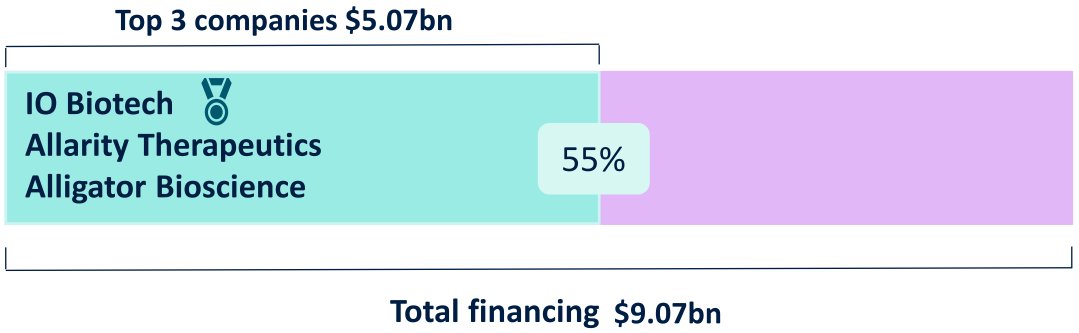


Swedish/Danish financing



- Average SE/DK deal size is **$166m vs. $96m** for Europe (+73%)
- **87** SE/DK oncology-focused companies received financing
- **30% of SE/DK total financing** activity

Proportion of oncology financing held by top companies

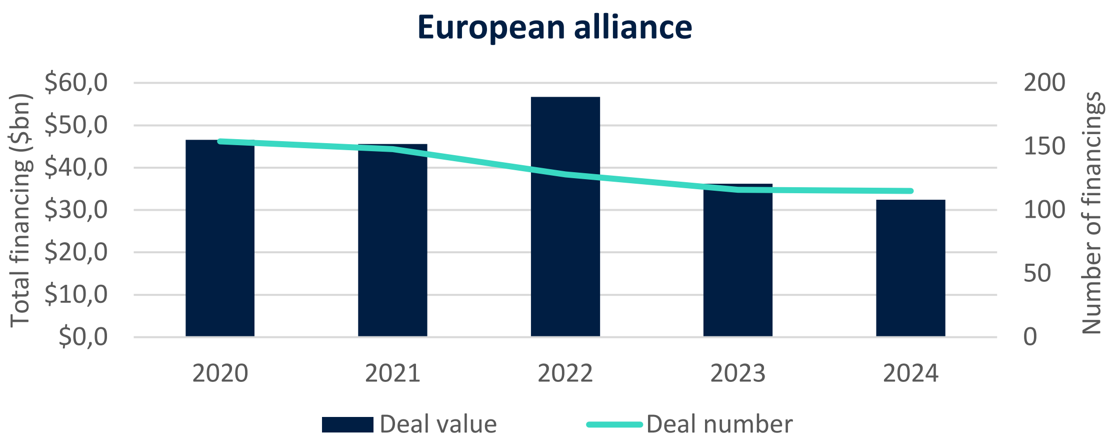


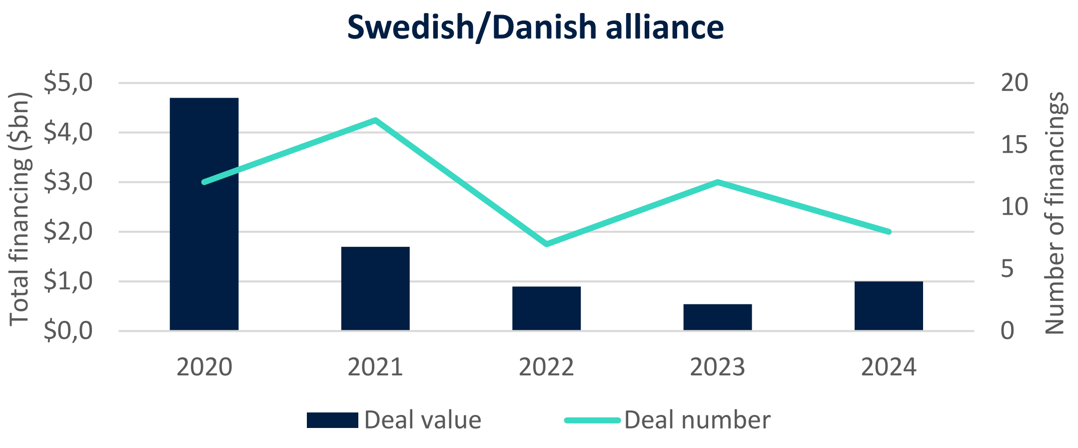
- Between 2020-24, **3 companies** received 4 rounds of financing totaling 55% of the region's oncology financing
- **IO Biotech received 32%** of SE/DK funding in oncology companies - Series B financing

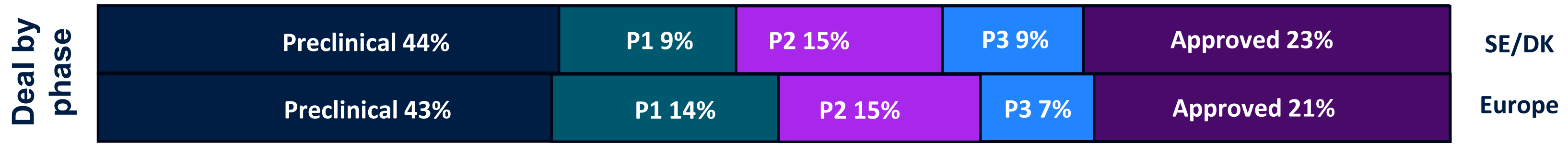
Source: Biomedtracker [Accessed February 2025]

Swedish-Danish Oncology Alliance Activity

The value of Swedish-Danish alliance deals fell by 40% from 2021 to 2024, with the number of deals falling by 53%





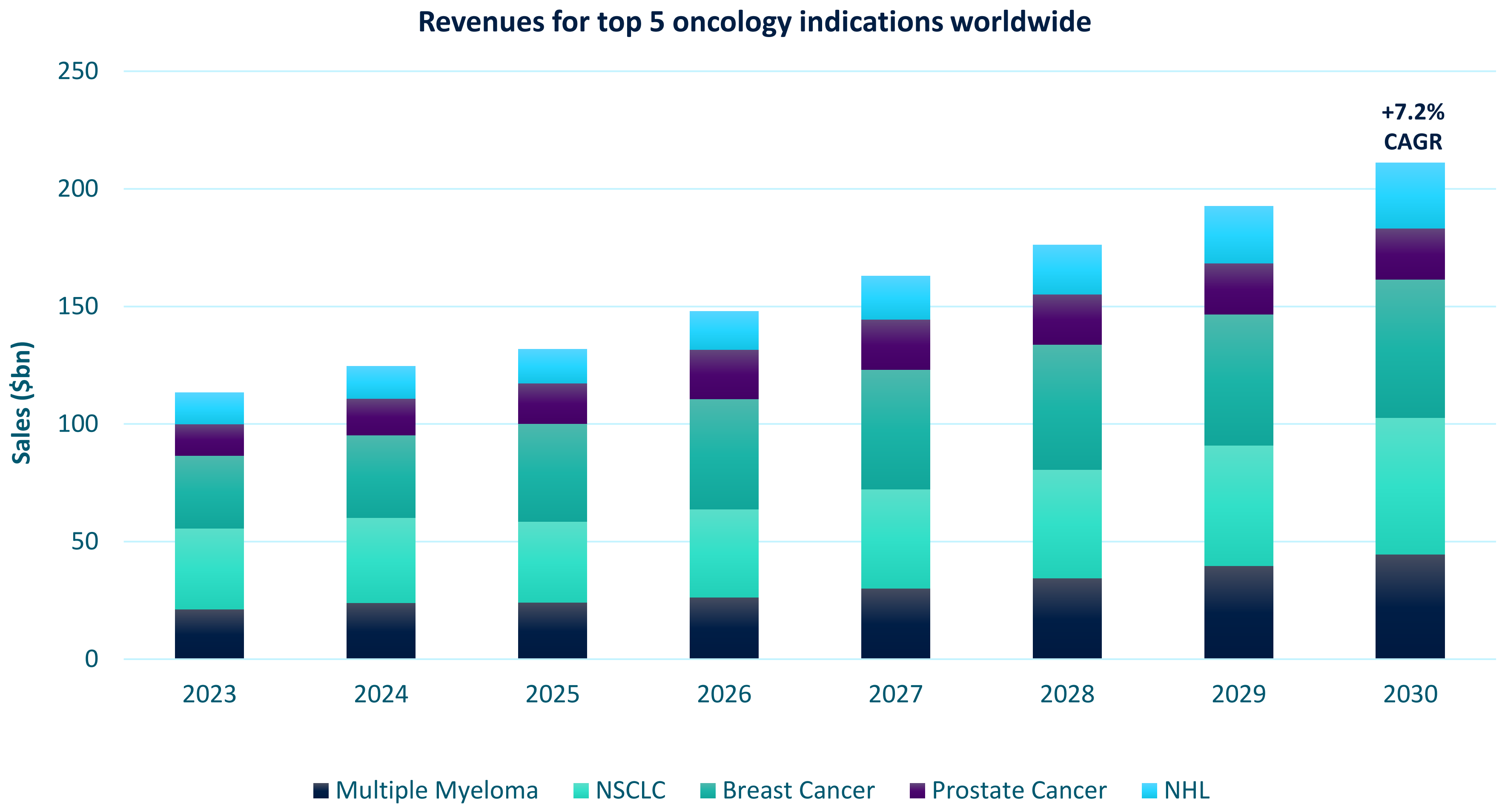


- **The average European alliance* deal is 52% larger than the value of SE/DK's**
- **26%** of SE/DK alliance deals are within oncology vs **34%** in Europe - 73% were licensing deals and tend to happen in earlier phases
- **35% of SE/DK alliance deals involved small molecules;** 16% monoclonal antibodies - cell and gene, viral, and mRNA therapies all were **least common** across markets
- Deal structure - 20% had upfront payments, 25% milestones, and 30% royalties

Source: Biomedtracker [Accessed February 2025] *Includes equity, M&A, joint venture, licensing

Top Oncology Indication Revenues Worldwide

Growth across biggest oncology markets will grow by 7.2% by 2030

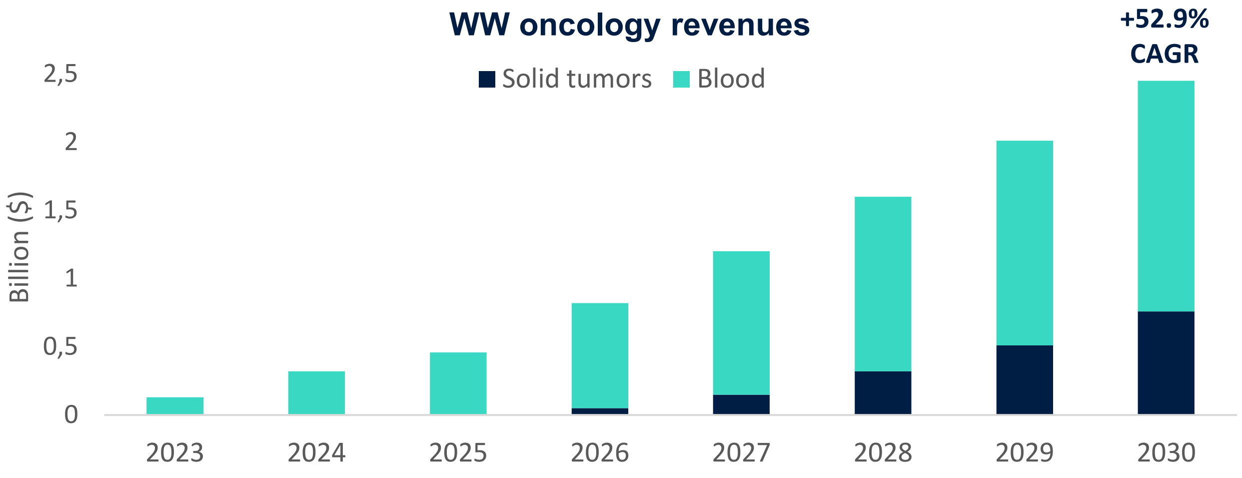


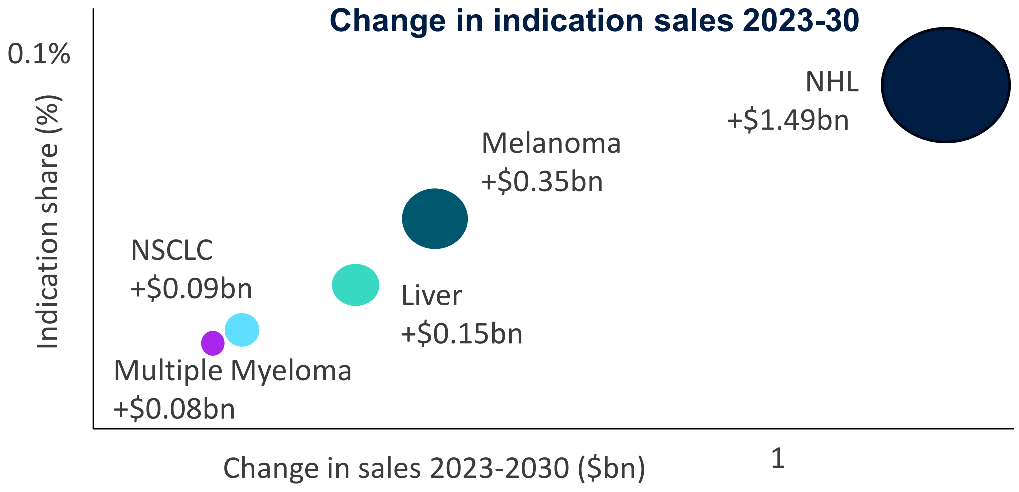
- Growth was sustained across most markets between 2023-30 - **CAGR of 7.2%**
- Revenues from branded oncology drugs are expected to slow from 2025-30, due to key patent expiries
- Development in **breast cancer**, especially triple negative, and **non-small cell lung cancer (NSCLC)** will primarily drive this growth
- The prostate cancer market will remain steady across forecasted years
- NHL will see sales increase towards end of forecasted period

Source: Evaluate Pharma [Accessed March 2025]

Sweden and Denmark: Oncology Market Landscape

Oncology revenues from SE/DK companies is expected to rise by 53% CAGR by 2030, with most revenues coming from blood malignancies





- WW oncology revenues generated from SE/DK HQ companies are expected to **rise to $2.45bn by 2030**
- **Monoclonal antibodies** are expected to bring in **68% of revenues**, largely driven by **Epkinly's $1.49bn increase** in sales by 2030
- **NHL** is expected to see the greatest increase in revenues by 2030
- From these revenues, **Genmab is expected to see $1.69bn by 2030** (+$1.63bn) and hold **68.7%** of the market – driven mostly by Epkinly
- **IO Biotech is expected to see $0.4bn** by 2030 (+$0.4bn) and hold 16.4% of the market

Source: Evaluate Pharma [Accessed February 2025]

Sweden and Denmark: Top 10 Oncology Indications

Sweden and Denmark focus on NHL and its associated subtypes at a higher rate than the RoW

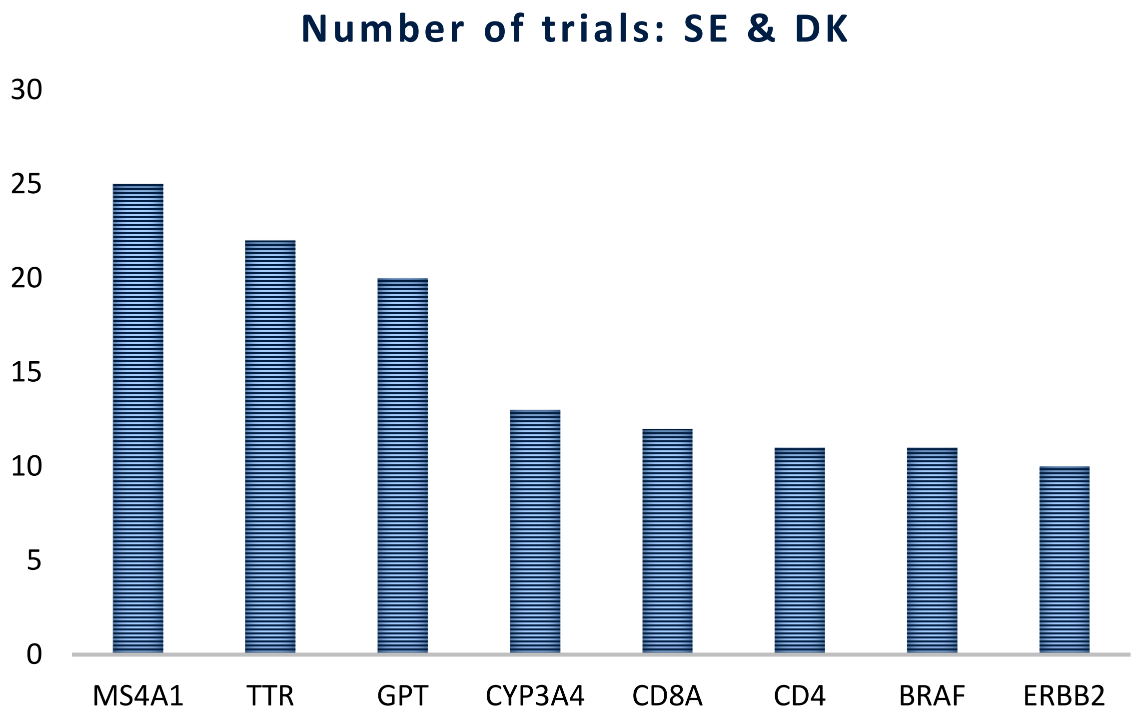
- Ongoing clinical trials based in Sweden and Denmark are focused on **breast cancer**, **non-Hodgkin's lymphoma (NHL)**, and **NSCLC**
- Global trends similarly show breast cancer and NSCLC to have the most active development
- However, Sweden and Denmark trials go **against** global trends, with more drugs being investigated in **chronic lymphocytic leukemia (CLL)** and **follicular lymphoma,** largely due to Epkinly
- Sweden and Denmark also are **not focusing** on assets in the **brain cancer**, **pancreatic cancer**, and **acute myelogenous leukemia (AML)** spaces

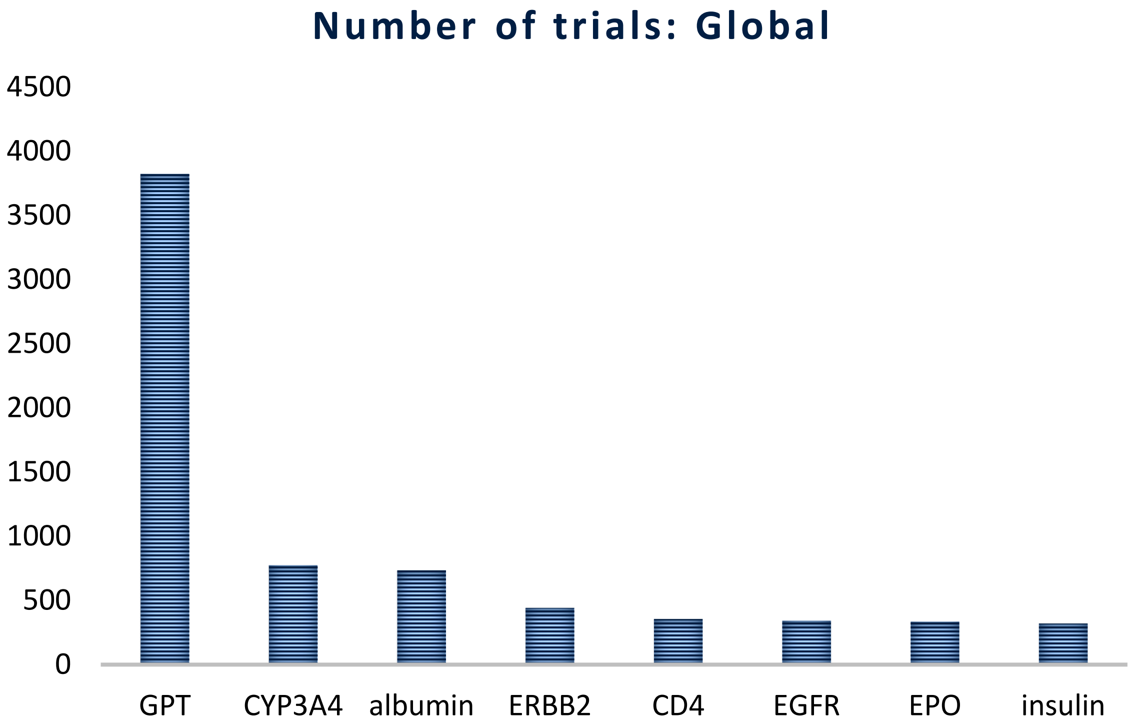
Ranking	Sweden & Denmark	Worldwide
1	**DLBCL**	Ovarian cancer
2	Ovarian cancer	Non-Hodgkin's Lymphoma
3	**Follicular lymphoma**	Myeloma
4	**CLL**	**AML**
5	Myeloma	**Brain cancer**
6	Colorectal cancer	Prostate cancer
7	Prostate cancer	**Pancreatic cancer**
8	NSCLC	Colorectal cancer
9	Non-Hodgkin's Lymphoma	NSCLC
10	Breast cancer	Breast cancer

Source: Pharmaprojects [Accessed January 2025]

Sweden and Denmark: Trial Biomarkers

22% of European oncology trials testing in MS4A1-positive patients are Swedish and Danish trials



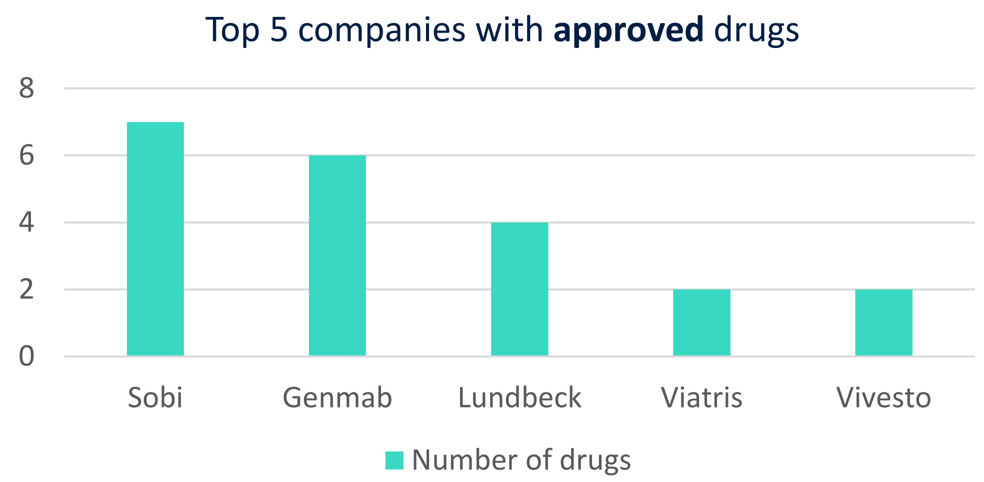


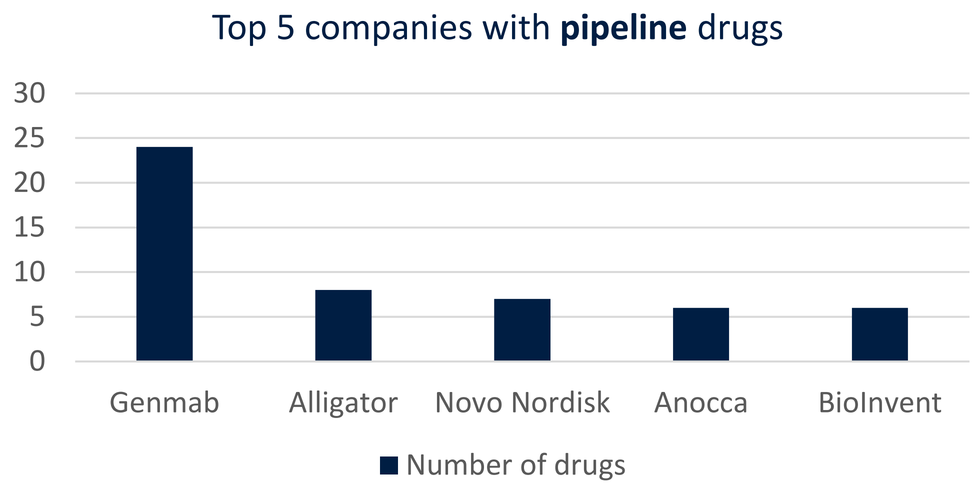
- **23%** of trials run by SE/DK-HQ companies are investigating assets in **MS4A1-positive patients**
- MSA41, also known as CD20, is a common biomarker seen in cancers associated with B-cell deterioration such as CLL and DLBCL; this matches the trends seen in Sweden and Denmark, where companies have been focusing on NHL and its subtypes
- GPT is a prognostic biomarker which can be investigated across several indications, including non-Hodgkins lymphoma and breast cancer

 Source: Trialtrove [Accessed January 2025]

Swedish and Danish Companies: Pipeline and Approved Oncology Drugs

Oncology drug development within Swedish and Danish companies is accelerating, with seven times more oncology assets in the pipeline than currently approved



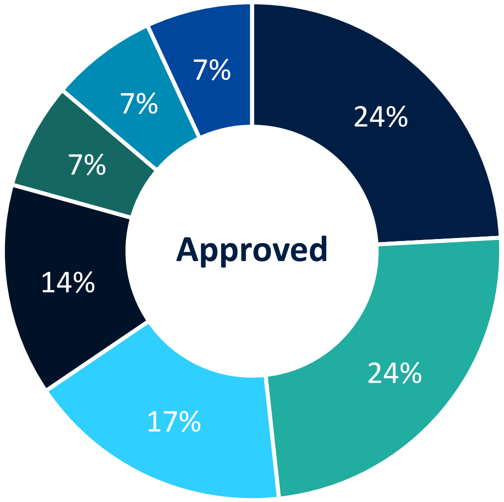


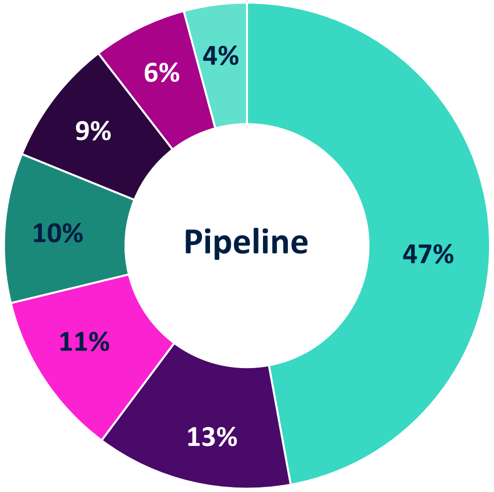
- **There are 27 drugs approved** within oncology indications from Swedish-Danish companies, **Sobi leads** the launched landscape with 7 approved assets – largely in **blood malignancies**
- 11 Swedish-Danish companies have at least one approved oncology asset vs. 82 companies with at least one pipeline oncology asset
- **There are 198 drugs being investigated** within oncology indications from Swedish-Danish companies; **Genmab leads** with assets mostly being investigated in solid tumors, NSCLC, and NHL
- A greater number of these pipeline assets are being investigated within Sweden compared to Denmark (99 vs. 62)
- Sweden and Denmark have seen recent increases in oncology drug development, with **67% of these assets in preclinical development; only 7% are in Phase 3 development**

 Source: Pharmaprojects [Accessed March 2025]

Sweden and Denmark: Mechanisms of Action

Sweden and Denmark developing more immuno-oncology therapies, as DNA inhibitors take a back seat





- The MoA focus for SE/DK companies aligns with global trends, with an **increasing focus on IO therapies**
- A large focus of approved oncology therapies are **DNA and angiogenesis inhibitors** as many anticancer regimens include:
  - VEGF inhibitors (bevacizumab)
  - Chemotherapies
- The most common technologies for approved therapies are small molecules, monoclonal antibodies and proteins

- Major shift towards **innovative and targeted therapies**
- **Almost half** of investigative drugs are IO therapies
- SE/DK companies are developing **10% of Europe's IO therapies**
- Monoclonal and bispecific antibodies, anticancer vaccines, and cell therapies are the most common pipeline drug technologies
- Within Europe **gene therapies fall within the top 5** – mostly targeting ALL, AML – which SE/DK is less focused on

Source: Pharmaprojects [Accessed March 2025]

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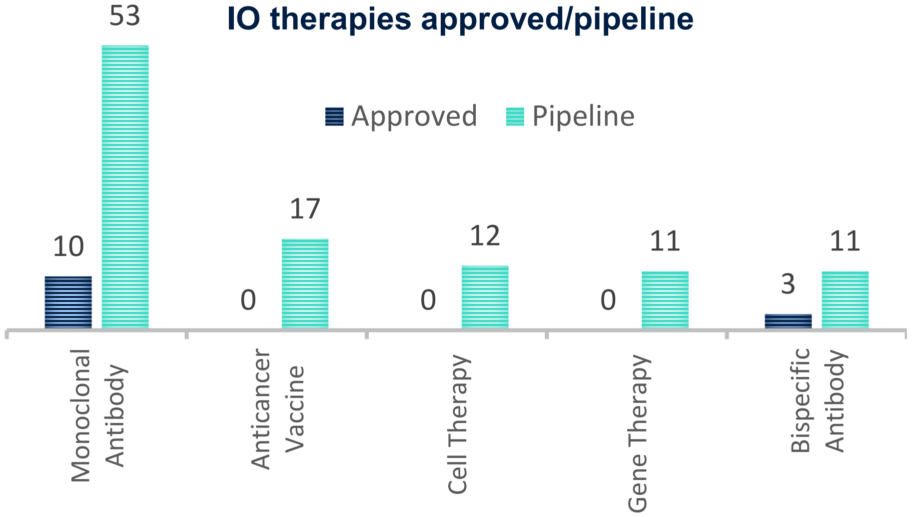
Sweden and Denmark: Immunotherapies

Sweden and Denmark-based companies have a higher focus on anticancer vaccines

IO therapies approved/pipeline



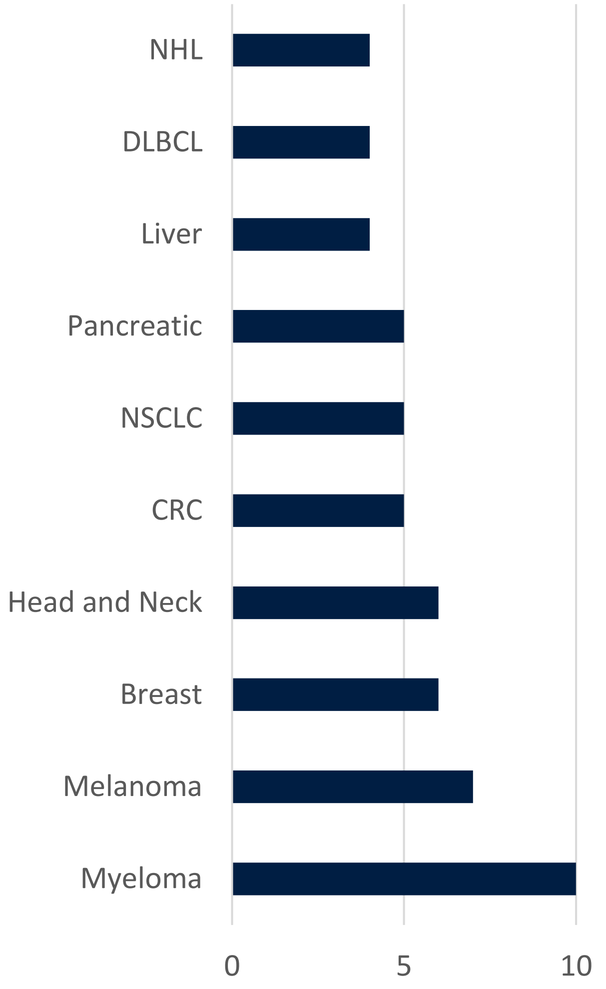
Genmab
Alligator
Anocca

97 total IO therapies

36% of all IOs

- A greater number of Swedish-Danish companies are developing more innovative IO therapies
- Shift from monoclonal and bispecific antibodies to advanced therapies
- **Genmab leads IO development; Roche leads Europe**

Top 10 Indications for IO therapies



- **Monoclonal antibodies** are the most common IO therapy in development both globally and within Europe
- SE/DK has a **higher focus on anticancer vaccines** and accounts for **12% European efforts**
- There are **1,044 gene therapies** being developed worldwide, SE/DK is developing 11 of them
- Cell and nucleic acid therapies fall higher ranked in global trends than is seen across SE/DK
- **Myeloma is the most common indication** IO therapies are developed by SE/DK companies for
- Within Europe, NSCLC, CRC, and breast cancer take the top spots

Source: Pharmaprojects [Accessed January 2025]

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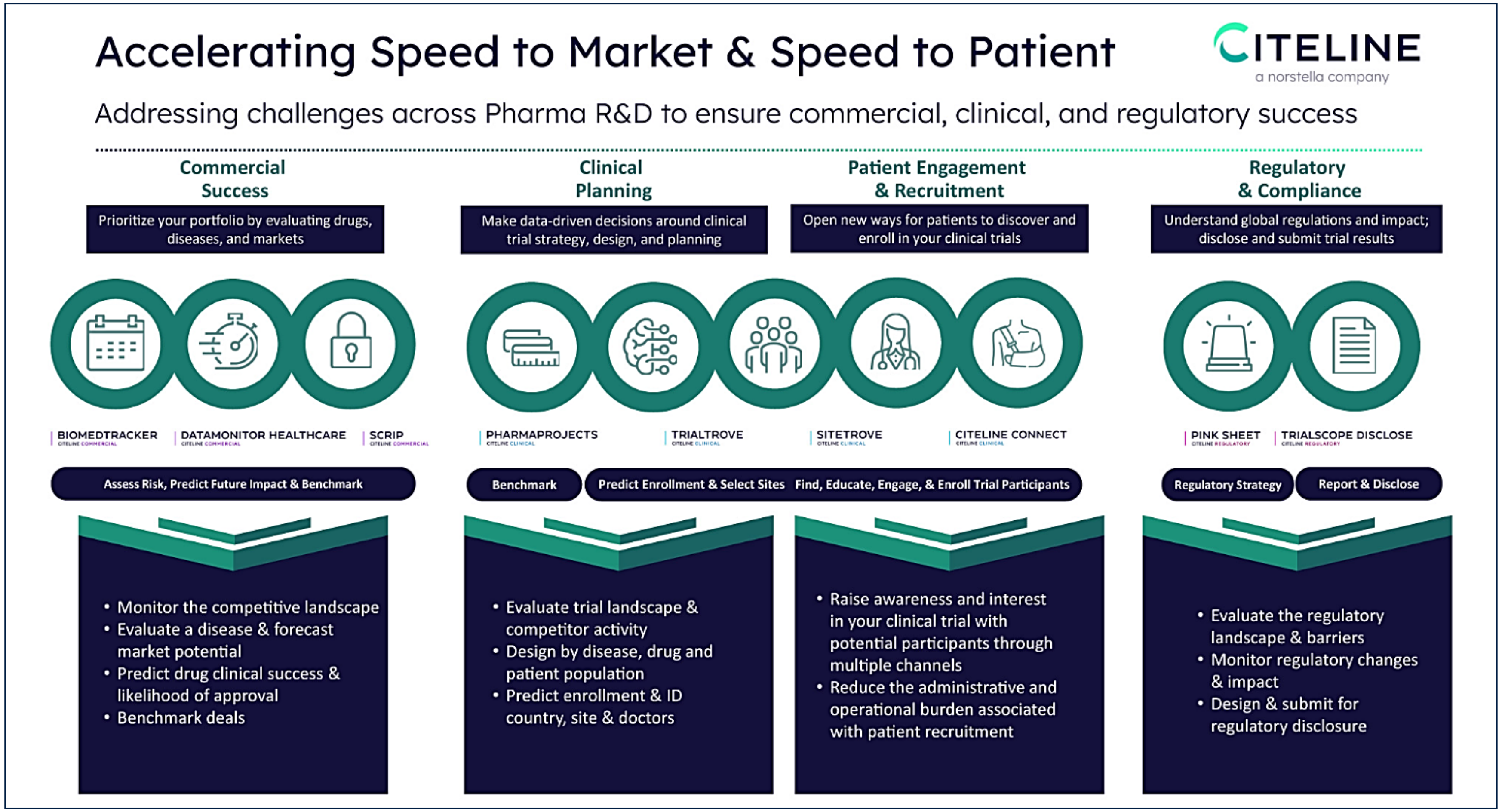
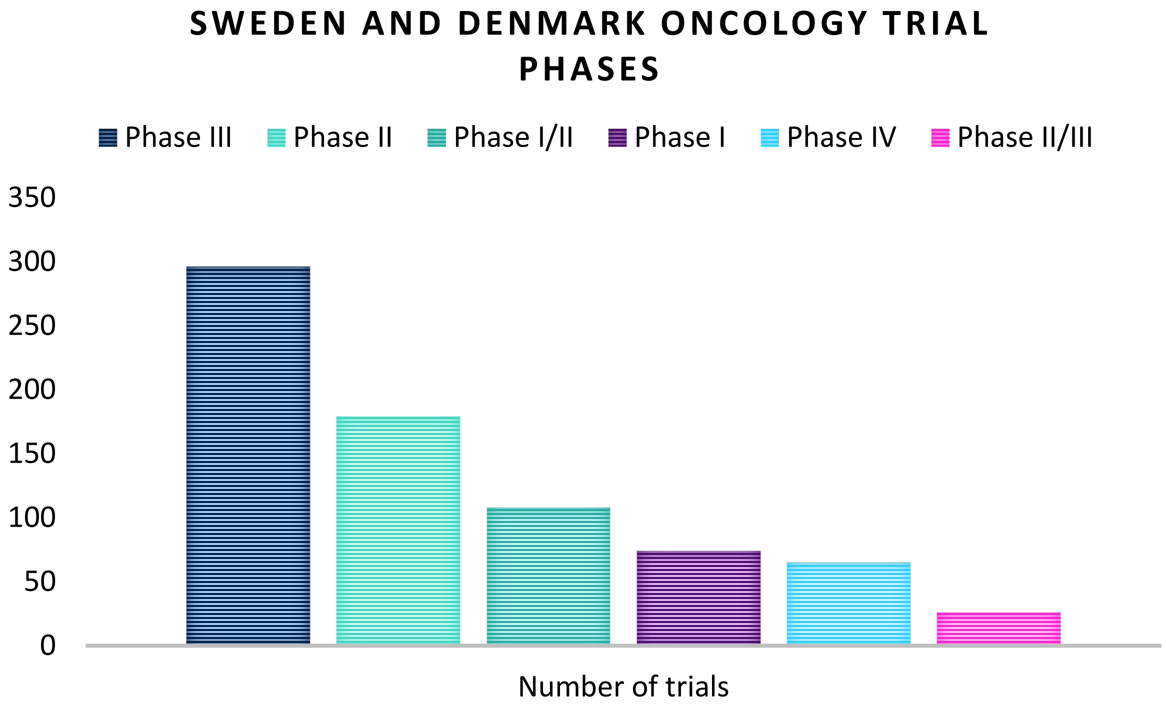
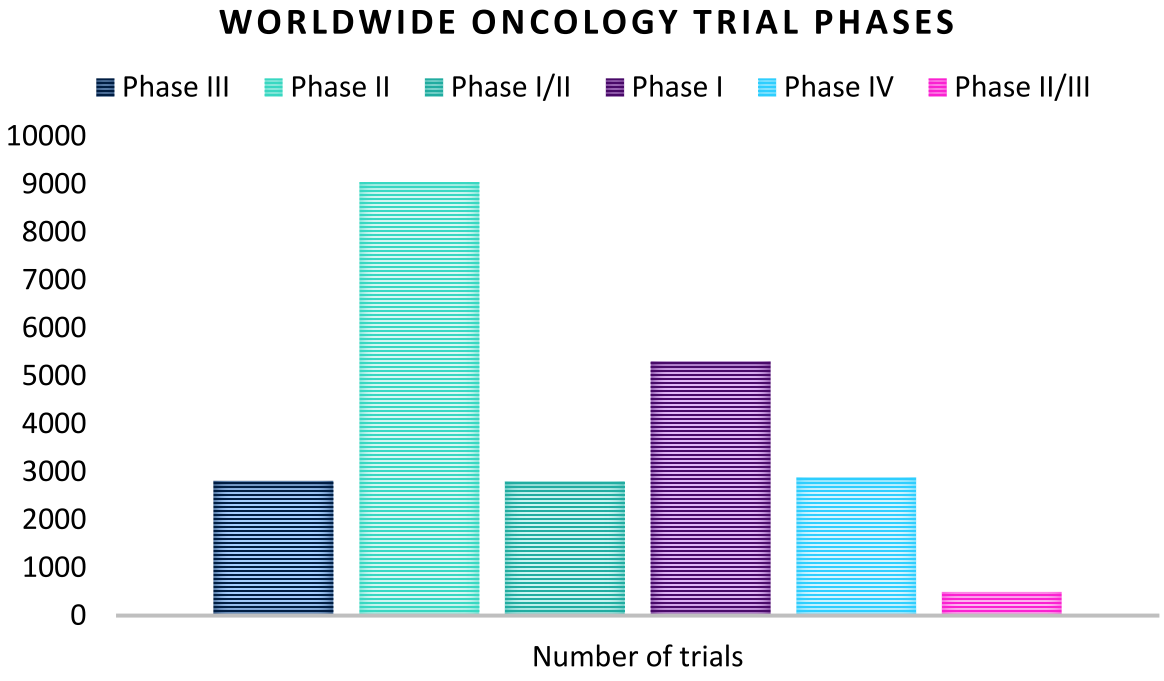


Please contact Emilie Moussin (emilie.moussin@citeline.com) to continue conversations

Oncology Trial Phases

10% of worldwide Phase 3 oncology trials are in SE & DK; 1% are in Phase 2





- Ongoing trials focused on anticancer drugs in Sweden and Denmark are mostly in **Phase 3** (~40%)
- In contrast, most oncology trials worldwide are in **earlier phases** of development (Phase 1 and 2)
- Drugs being investigated at Swedish and Danish sites are generally **closer** to **commercialization**; this is because **local data** is often required for regulatory approval

 Source: Trialtrove [Accessed January 2025]

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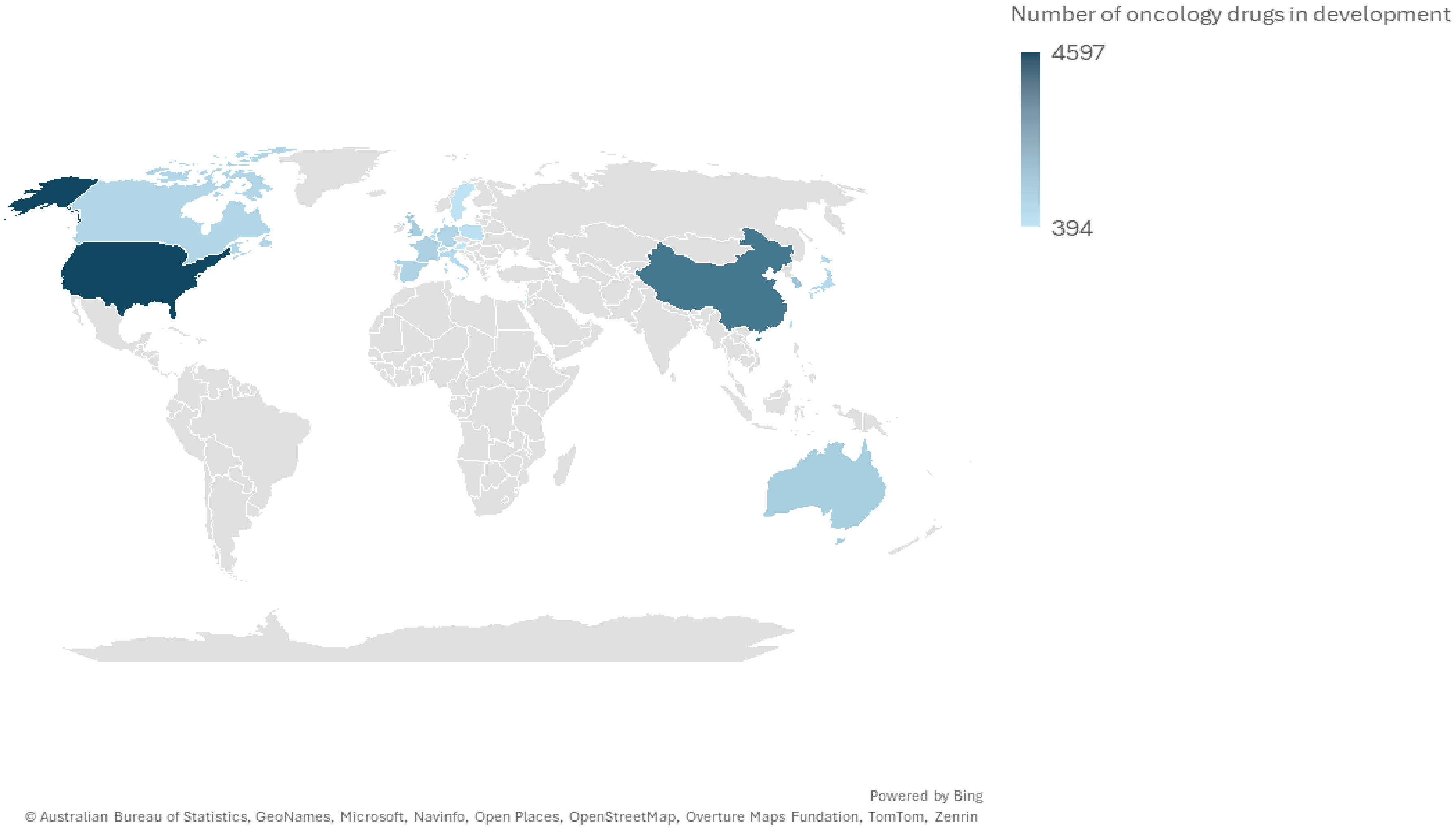
Number of Oncology Drugs in Development Worldwide

22% of WW oncology drugs are in development in the US; 4% are in development in Sweden or Denmark

- The **USA** is the country with the most oncology drugs in development **(4,597)**, with **China (3,334)** and **South Korea (1,342)** coming second and third, respectively
- **Sweden** and **Denmark** have **450** and **427** unique oncology drugs in active development, respectively
- **Austria** is the country with the lowest number of drugs in development for oncology, at **394**



Source: Trialtrove [Accessed January 2025]

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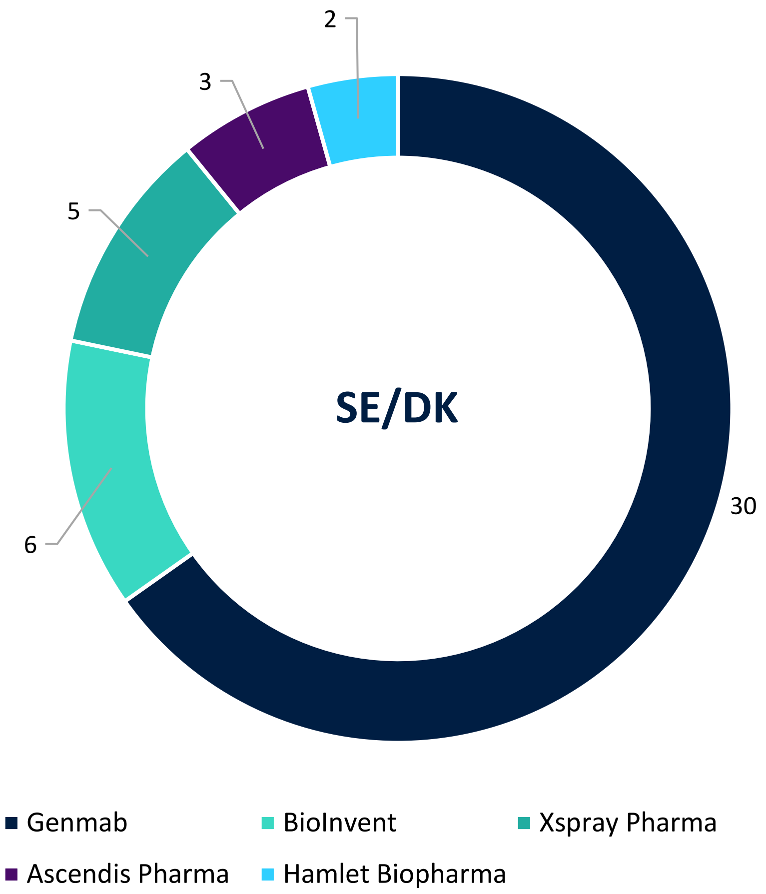
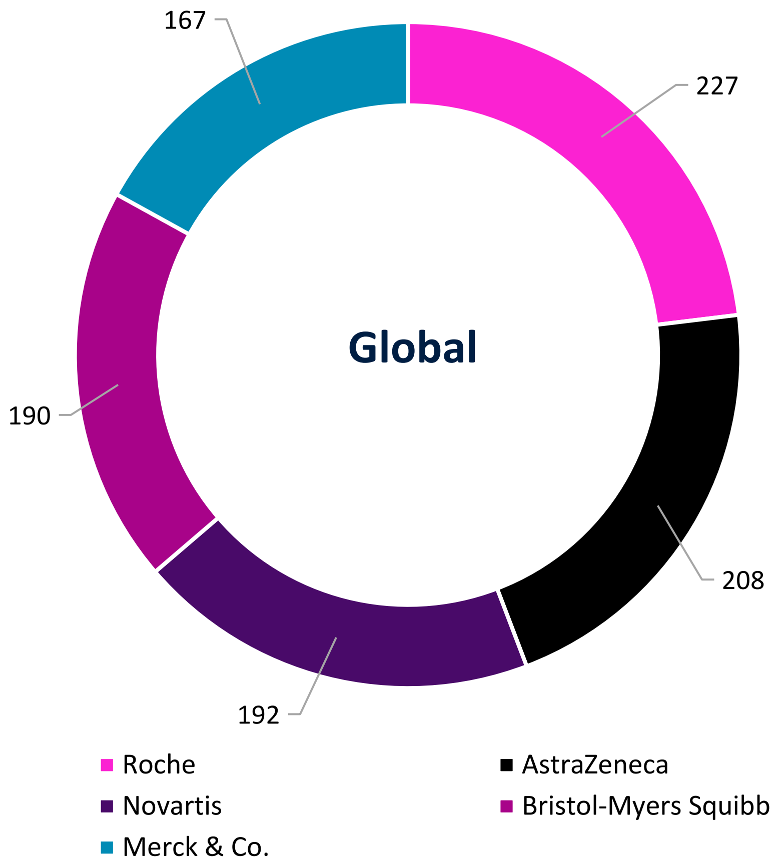
Swedish and Danish Companies: Oncology Trial Sponsors

The top 3 Swedish and Danish trial sponsors are focusing on NHL

- The 5 Swedish/Danish companies sponsoring the most oncology trials are **Genmab**, **BioInvent, XSpray Pharma, Ascendis Pharma,** and **Hamlet Biopharma**
- Worldwide, the companies sponsoring the most oncology clinical trials are **Roche**, **AstraZeneca**, **Novartis**, **Bristol-Myers Squibb**, and **Merck & Co.**
- **Genmab** is sponsoring **more** trials than the other 4 companies combined; almost all these trials are looking at **Epkinly**
- **BioInvent** trials focus on BI-1206, which is being investigated in NHL
- 4 of the 5 **Xspray** trials are looking at **CML**

Number of trials per top 5 sponsor





 Source: Trialtrove [Accessed January 2025]