

REVOLUTIONISING THE MOLECULAR DIAGNOSTICS THE SITUATION IN IRELAND



In Ireland, much has been done to advance genetics and genomics in recent years. Excellence in clinical, laboratory and bioinformatics specialties can be seen throughout country. Establishment of a secure, scalable and accessible data and analytics infrastructure needs to continue to support the provision of clinical services, bioinformatics, data access and research.

CORE PILLARS	Well Implemented	Implemented	Not Implemented	Clear Information Not Available
Infrastructure and tools	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Molecular tumour boards and expertise	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Reimbursement for NGS and liquid biopsy	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Education/training/awareness	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Governance	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Healthcare workforce	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Data sharing and linking	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

INFRASTRUCTURE AND TOOLS

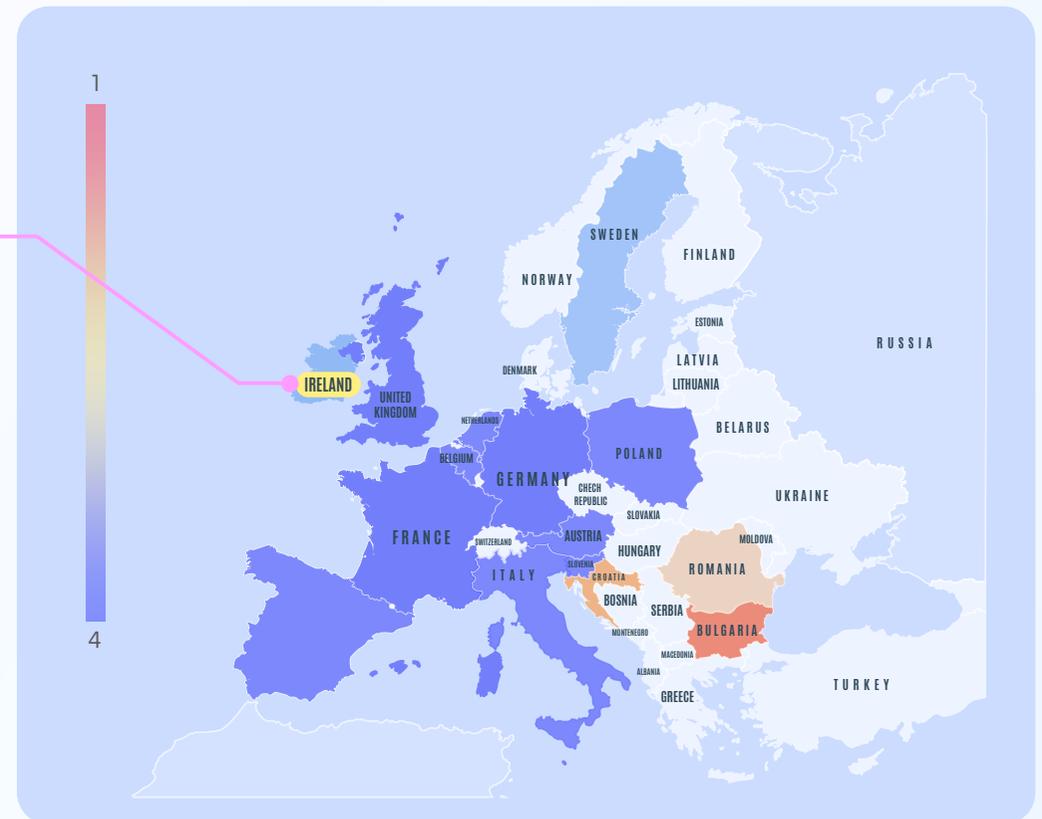
COUNTRIES' CORRELATION	INDEPENDENT VARIABLE
Dependent Variable	Funding
NGS Centre	High Positive Correlation
Equipment	High Positive Correlation
Routine Utilization	Medium Positive Correlation

1-0,8 - Very High Positive
 0,79-0,6 - High Positive Correlation
 0,59-0,4 - Medium Positive Correlation

0,39-0,2 - Low Positive Correlation
 0,19-0 - Very Low Positive Correlation

IRELAND	Available	Not Available
NGS centre	●	○
Equipments	●	○
Funding	●	○
Routine utilization	○	●

Ireland has NGS centres with the necessary equipment and infrastructure for NGS testing. The country also benefits from sufficient funding to develop proper infrastructure for NGS. However, the routine utilization of NGS testing is not widespread in Ireland, indicating that the integration of NGS technology into regular healthcare or research practices may still be limited. Overall, while Ireland has the necessary resources and support for NGS, there is room for increased adoption and utilization of NGS in routine healthcare and research settings.

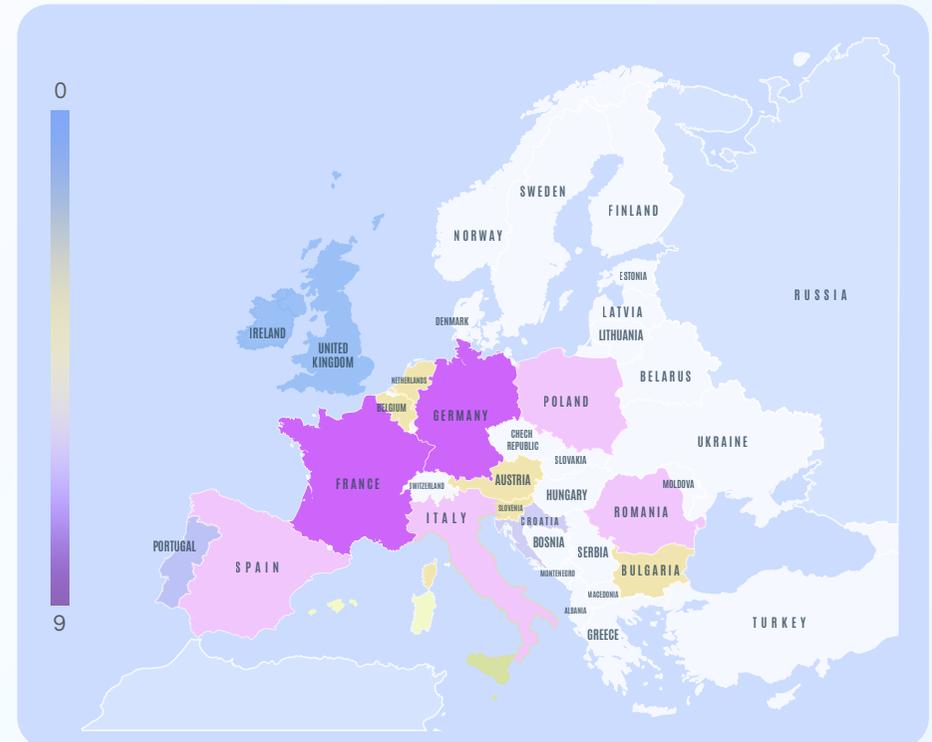
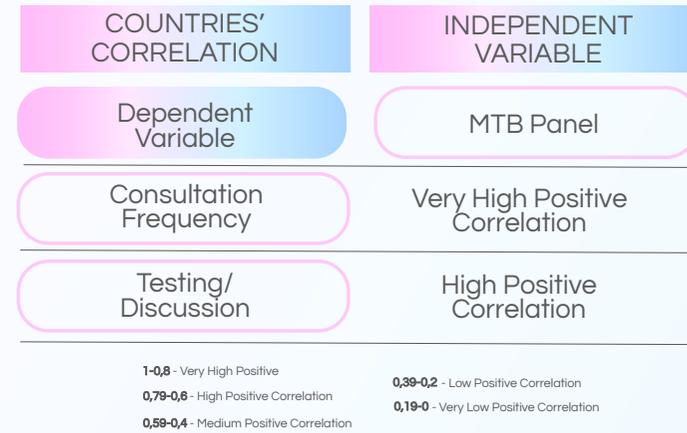


MOLECULAR TUMOUR BOARDS AND EXPERTISE

Ireland currently lacks the availability of a Molecular Tumor Board (MTB) for molecular tumor consultations. There are no recurring meetings organized for consultation within the MTB, indicating a lack of regular forums for discussing molecular tumor cases. Additionally, there is no active testing or discussion of patients within an MTB setting in Ireland. Overall, there is a need for the establish-

	MTB Panel	Consultation frequency	Testing/ Discussion
Belgium	●	●	●
Croatia	●	●	○
Spain	●	●	○
Italy	●	●	●
France	●	●	●
Germany	●	●	●
United Kindgom	○	○	○
IRELAND	○	○	○
Slovenia	●	●	●
Poland	○	●	●
Sweden	○	●	○

● Available	● Very High	● Low	● High
○ Not Available	● High	○ Very Low	● Medium
	● Medium		○ Low



REIMBURSEMENT FOR NGS AND LIQUID BIOPSY IN IRELAND

Ireland does not currently provide reimbursement for NGS or liquid biopsy testing. This lack of reimbursement creates potential barriers to accessing and utilizing these advanced diagnostic technologies. Additionally, there is insufficient funding available for the reimbursement process in Ireland, indicating challenges in allocating adequate financial resources for covering the costs of NGS and liquid biopsy testing. These factors may impact the widespread adoption and accessibility of NGS and liquid biopsy in the country.

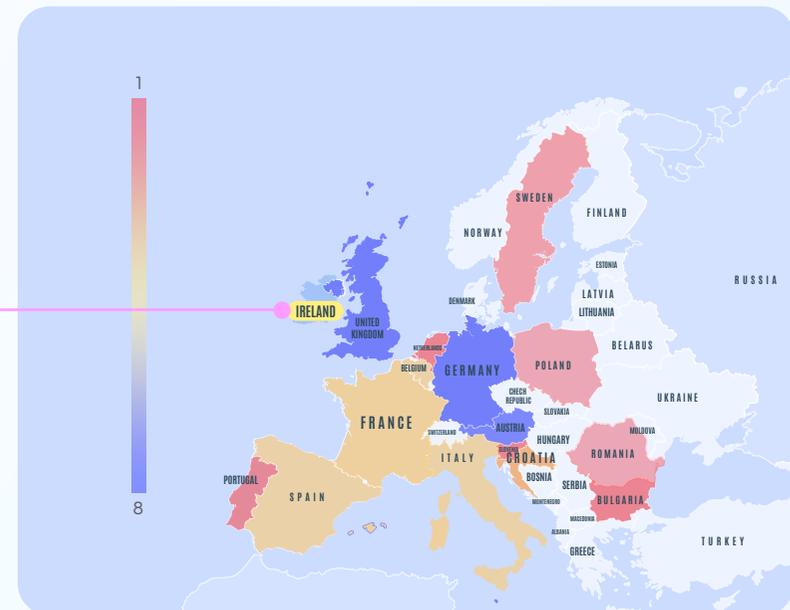
CENTRES' CORRELATION	INDEPENDENT VARIABLE
Dependent Variable	Funding
Reimbursement for NGS	Medium Positive Correlation
Reimbursement for Liquid Biopsy	Low Positive Correlation

1-0,8 - Very High Positive
 0,79-0,6 - High Positive Correlation
 0,59-0,4 - Medium Positive
 0,39-0,2 - Low Positive Correlation
 0,19-0 - Very Low Positive Correlation

EDUCATION/TRAINING/AWARENESS

In Ireland, there is a moderate level of understanding and awareness regarding NGS testing and application. There is no availability of dedicated educational programs or workshops to increase awareness about NGS. However, there are educational programs available for proper training in NGS, indicating efforts to equip professionals with the necessary skills and knowledge. To further promote the adoption and effective use of NGS technology, it would be beneficial to address the shortage of trained personnel and explore opportunities for increasing awareness through educational initiatives and workshops.

COUNTRIES' CORRELATION	INDEPENDENT VARIABLE
Dependent Variable	Educational Programmes
Trained Personnel	Low Positive Correlation
Awareness/ Understanding	Medium Positive Correlation
Educational programme/ workshops to increase awareness	Medium Positive Correlation



GOVERNANCE

Labs or institutions in Ireland do not currently hold ISO accreditation or certification. However, there is a positive aspect as clinical guidelines in Ireland are regularly updated, indicating efforts to ensure that laboratory testing practices align with the latest evidence-based recommendations. The utilization of external guidelines is also practiced in Ireland, suggesting that labs or institutions follow established guidelines from external sources. However, the use of internal guidelines and external quality assessment is not prevalent in Ireland. Overall, while there is room for improvement in terms of ISO accreditation, the regular updating of clinical guidelines reflects a commitment to maintaining high standards in laboratory testing practices in Ireland.

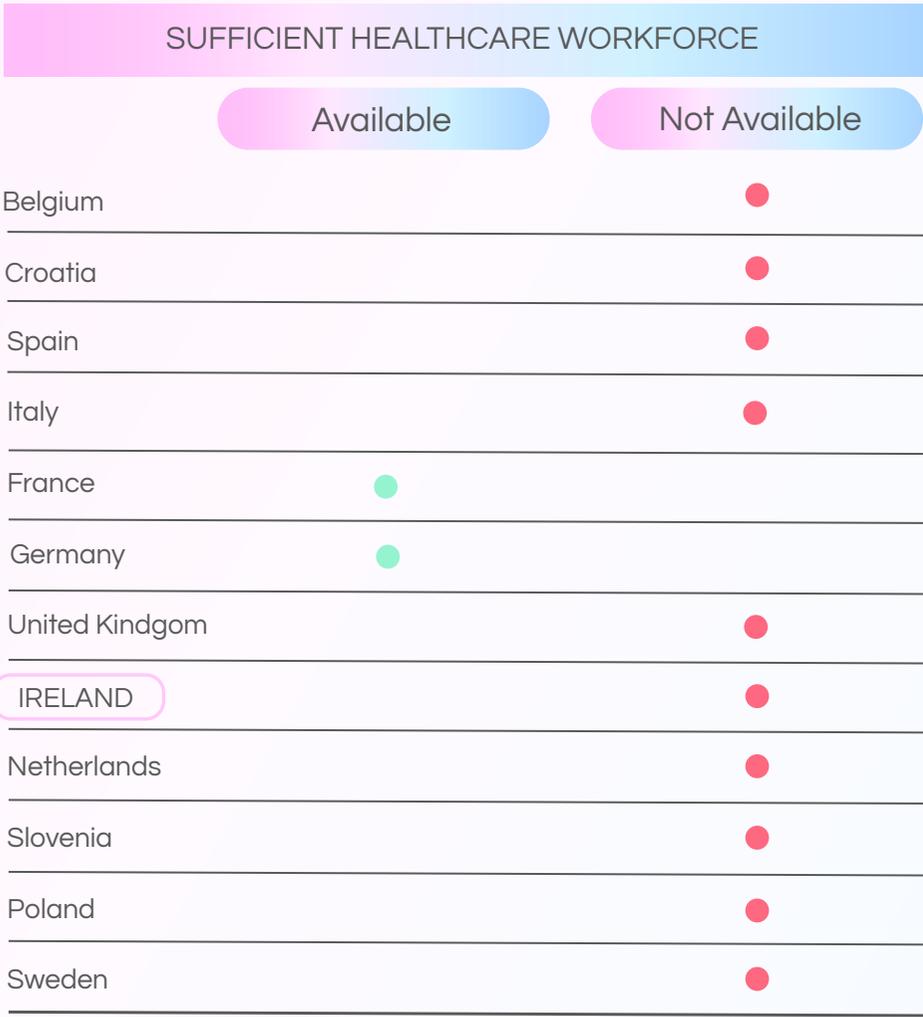
COUNTRIES' CORRELATION	INDEPENDENT VARIABLE	COUNTRIES' CORRELATION	INDEPENDENT VARIABLE
DEPENDENT VARIABLE	ISO Accreditation/ Certification	DEPENDENT VARIABLE	Clinical Guidelines
Internal Guidelines	Very Low Positive Correlation	Internal Guidelines	Very Low Positive Correlation
External	Low Positive Correlation	External	Very Low Negative Correlation
External Quality Assessment	Low Negative Correlation	External Quality Assessment	Low Negative Correlation

1-0,8 - Very High Positive 0,79-0,6 - High Positive Correlation 0,59-0,4 - Medium Positive Correlation
 0,39-0,2 - Low Positive Correlation 0,19-0 - Very Low Positive Correlation

	ISO Accreditation/ Certification	Clinical Guidelines	Internal Guidelines	External Guidelines	External Quality Assessment
Belgium	●	●	●	●	●
Croatia	●	●	●	●	●
Spain	●	●	●	●	●
Italy	●	●	●	●	●
France	●	●	●	●	●
Germany	●	●	●	●	●
United Kindgom	●	●	●	●	●
IRELAND	●	●	●	●	●
Slovenia	●	●	●	●	●
Poland	●	●	●	●	●
Sweden	●	●	●	●	●

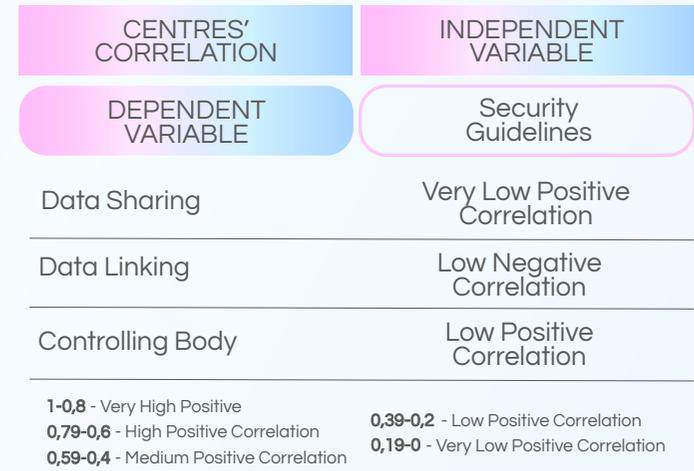
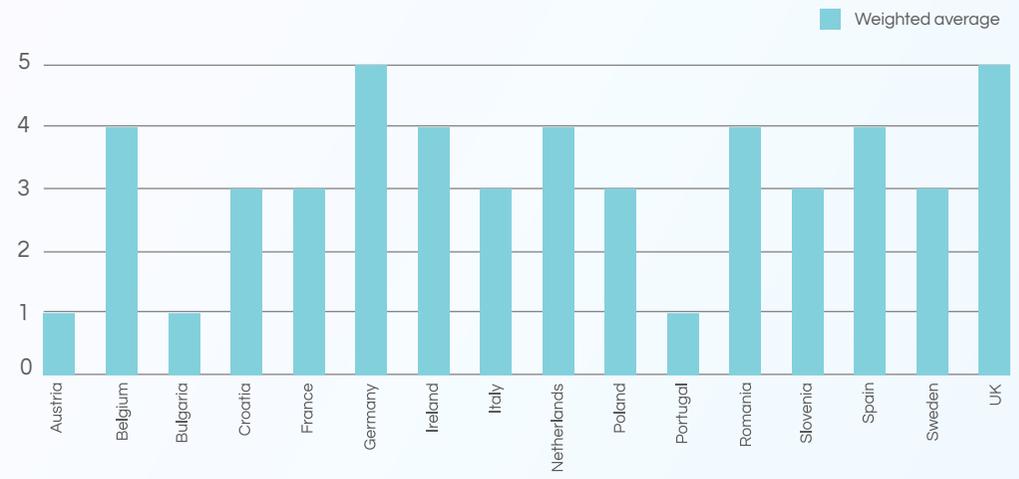
HEALTHCARE WORKFORCE

The data suggests that there may be a lack of availability of a sufficient healthcare workforce or personnel in Ireland. This implies that the country is facing challenges in terms of an inadequate number of healthcare professionals to meet the demands and needs of the healthcare system. The shortage of personnel can potentially impact the delivery of healthcare services, including cancer diagnosis, treatment, and management, and may require attention and strategies to address the workforce shortage and ensure adequate healthcare coverage for the population.



DATA SHARING AND LINKING

Ireland actively engages in cross-border and cross-disciplinary collaborations, fostering cooperation and knowledge exchange. They have security guidelines in place to protect data integrity, addressing both external and internal threats. Data linking to the Electronic Health Record (EHR) is practiced, enabling comprehensive access to patient information. However, Ireland lacks a specific controlling body for data sharing, suggesting a decentralized approach to data governance. Overall, Ireland demonstrates a collaborative and secure environment for data sharing, although further considerations may be needed to establish centralized control and governance in data-sharing practices.





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