

REVOLUTIONISING THE MOLECULAR DIAGNOSTICS THE SITUATION IN SPAIN

In Spain, there may be a lack of availability of a sufficient trained workforce or personnel for NGS testing. The level of awareness and understanding regarding NGS testing and application is moderate. Cross-border and cross-disciplinary collaborations may be limited, indicating a potential need for more collaborative efforts between different regions or disciplines.



CORE PILLARS	Well Implemented	Implemented	Not Implemented	Clear Information Not Available
Infrastructure and tools	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Molecular tumour boards and expertise	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reimbursement for NGS and liquid biopsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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

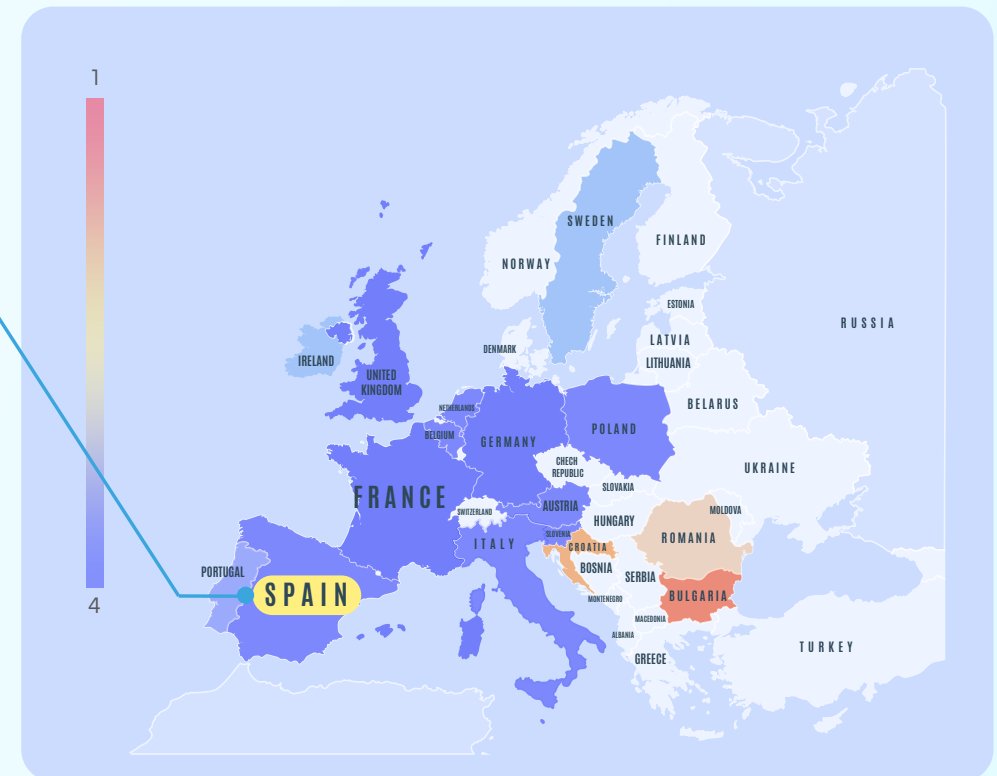
SPAIN	Available	Not Available
NGS centre	<input checked="" type="radio"/>	<input type="radio"/>
Equipments	<input checked="" type="radio"/>	<input type="radio"/>
Funding	<input checked="" type="radio"/>	<input type="radio"/>
Routine utilization	<input checked="" type="radio"/>	<input type="radio"/>

In Spain, NGS testing is available, supported by adequate infrastructure, funded appropriately, and routinely used which indicates a positive environment for the implementation and utilization of NGS technology in various aspects of healthcare and research within the country.

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



MOLECULAR TUMOUR BOARDS AND EXPERTISE

In Spain, there is availability of a Molecular Tumor Board (MTB), indicating the presence of a dedicated board for consultations related to molecular testing and treatment decisions. The board holds recurring meetings on a monthly basis, demonstrating regular engagement and collaboration. The number of patients being tested and discussed is relatively low, suggesting that the focus may be on select cases or specific research areas rather than a high volume of patients. Overall, Spain has established an MTB and engages in consultations, albeit with a lower patient testing/discussion frequency.

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

● Available
 ○ Not Available

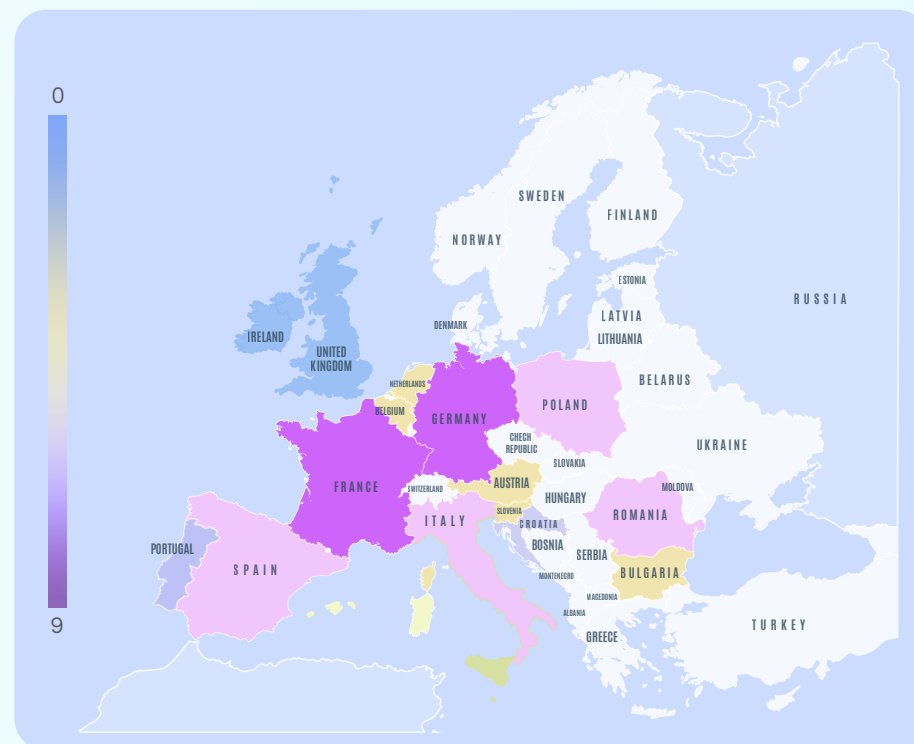
● Very High
 ● High
 ● Medium
 ● Low
 ○ Very Low

● High
 ● Medium
 ○ Low

COUNTRIES' CORRELATION	INDEPENDENT VARIABLE
Dependent Variable	MTB Panel
Consultation Frequency	Very High Positive Correlation
Testing/ Discussion	High 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



REIMBURSEMENT FOR NGS AND LIQUID BIOPSY IN SPAIN

In Spain, there is reimbursement available for both NGS and Liquid Biopsy, indicating that these diagnostic technologies are eligible for reimbursement from healthcare systems or insurance providers. However, there may be a lack of sufficient funding specifically allocated for the reimbursement process, suggesting that there may be challenges in ensuring adequate financial resources for covering the costs associated with NGS and Liquid Biopsy tests.

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

0,79-0,6 - High Positive

0,59-0,4 - Medium Positive

0,39-0,2 - Low Positive

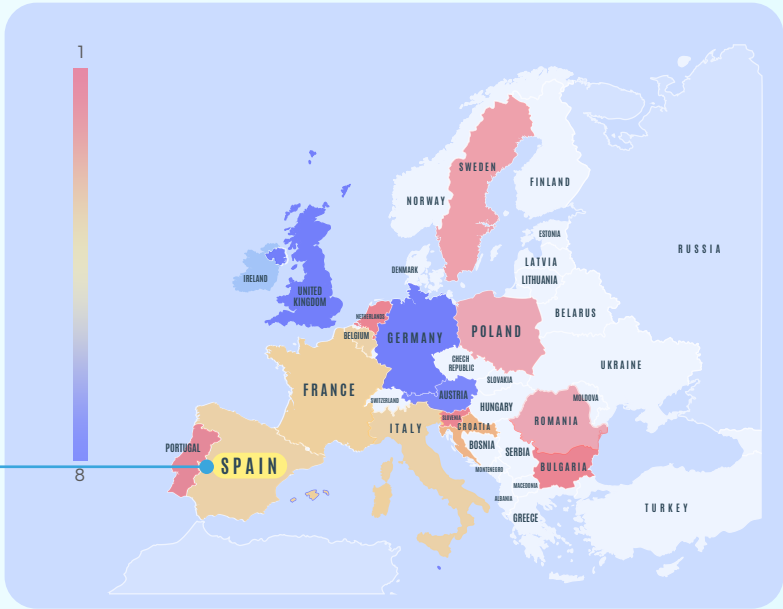
0,19-0 - Very Low Positive



EDUCATION/TRAINING/AWARENESS

In Spain, there may be a lack of availability of a sufficient trained workforce or personnel for NGS testing. The level of awareness and understanding regarding NGS testing and application is moderate. However, there is availability of educational programs and workshops to increase awareness, indicating efforts to improve knowledge and understanding in this field. Furthermore, there is also availability of educational programs for proper training, suggesting that Spain offers training opportunities to develop the necessary skills for conducting NGS testing.

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

In Spain, labs and institutions have ISO accreditation or certification, indicating that they meet the standards and requirements set by the International Organization for Standardization. Clinical guidelines are regularly updated, ensuring that healthcare professionals have access to the most up-to-date recommendations and protocols. While the use of external guidelines is prevalent, the use of internal guidelines is not explicitly mentioned. Additionally, the use of external quality assessment may be limited, suggesting that there might be room for improvement in terms of external evaluation of the quality of laboratory testing processes.

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	●	●	●	●	●

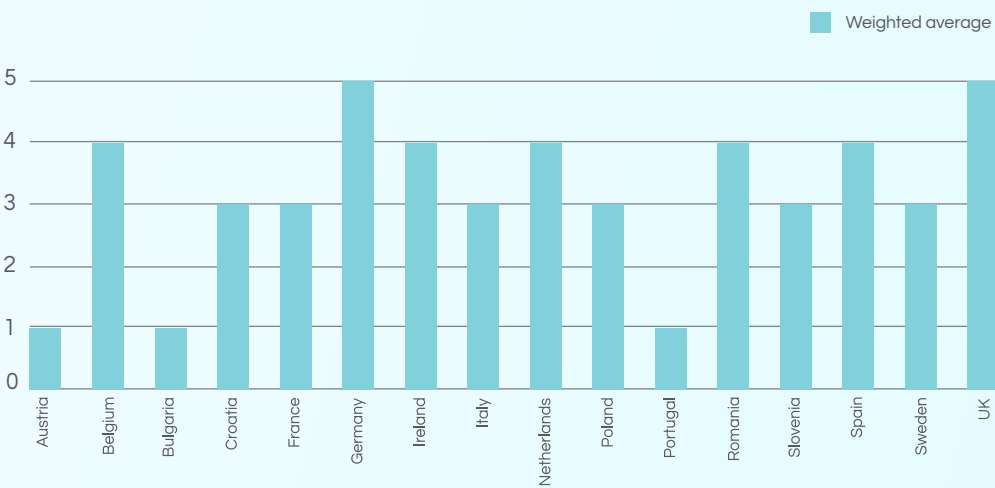
HEALTHCARE WORKFORCE

The data suggests that there may be a lack of availability of a sufficient healthcare workforce or personnel in Spain. 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.

SUFFICIENT HEALTHCARE WORKFORCE	
	AvailableNot Available
Belgium	
Croatia	
SPAIN	
Italy	
France	
Germany	
United Kindgom	
Ireland	
Netherlands	
Slovenia	
Poland	
Sweden	

DATA SHARING AND LINKING

In Spain, cross-border and cross-disciplinary collaborations may be limited, indicating a potential need for more collaborative efforts between different regions or disciplines. However, routine sharing of data is practiced, suggesting an established system for sharing data among relevant stakeholders. There is also the availability of security guidelines, both external and internal, indicating measures in place to ensure the protection and confidentiality of data. Data linking to Electronic Health Records is implemented, enabling the integration and utilization of data from electronic health records for various purposes.



CENTRES' CORRELATION	INDEPENDENT VARIABLE
DEPENDENT VARIABLE	Security Guidelines
Data Sharing	Very Low Positive Correlation
Data Linking	Low Negative Correlation
Controlling Body	Low 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



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