Readiness of health systems for the introduction of tumour-agnostic treatment

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Introduction

"Tumour-agnostic" (TA) or "histology-independent" therapies are a new class of treatment that target the genomic alteration within a tumour, regardless of where in the body it has formed. **Those therapies result in a durable response to treatment in affected patients** (>6 months).[1] The Food and Drug Administration (FDA) has thus far approved three medicines for tumour-agnostic indications, paving the way for their commercialisation in the US.[2] Additionally, entrectinib has recently been approved in Japan, and larotrectinib in Canada, Brazil and the EU, demonstrating the growing **international interest** in tumour-agnostic treatments.[3]

However, these types of therapies **face significant challenges in adoption** due to how these new technologies will be assessed for value and reimbursed, the readiness of the diagnostic infrastructure required to identify the "right" patients and to **ensure patients gain timely access**. The European and Canadian landscape review focused specifically on three areas:

Figure 1 – Assessment focus areas

Awareness & prioritisation	Levels of awareness and prioritisation of tumour-agnostics in cancer policy
HTA, funding & reimbursement	Market entry pathways and approach to value assessment and reimbursement
Diagnostic infrastructure	Readiness of diagnostic infrastructure required for patient identification

Method

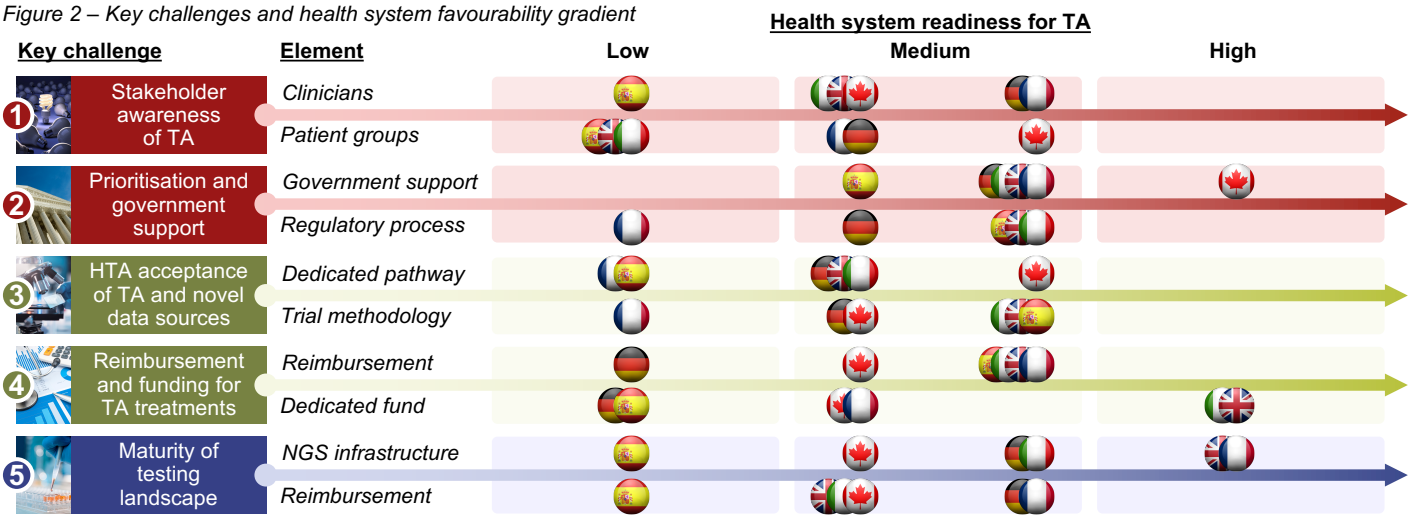
Research was conducted between November 2018 and February 2019 across **EU (UK, Spain, Germany, France, Italy) and Canadian markets**. It is based on a review of publicly-available industry reports, articles, publications and 30 interviews with oncologists, regulators, health technology assessors, policy makers, pathologists and payers.

The research and findings were structured around five categories:

1. Stakeholder awareness of TA
2. Prioritisation & government support
3. HTA acceptance of TA & novel data sources
4. Reimbursement & funding for TA treatments
5. Maturity of testing landscape

Results*

Figure 2 – Key challenges and health system favourability gradient



No one country system is optimal in enabling access to tumour-agnostic therapies, however best practices, expertise and insights are widely available.

1. **Awareness** of tumour-agnostic therapies is still **relatively low** beyond specialist oncologists.
2. UK, France and Canada are **prioritising next-generation sequencing (NGS) infrastructure**, however, a tumour-specific mindset dominates overall.
3. There is **a significant disconnect** between what regulators are looking for (i.e. overall response rates) and what HTA bodies require (i.e. active comparators and traditional endpoints).[4] HTA needs to **consider biomarker based endpoints**.
4. Managed entry agreements have **not to date addressed efficacy uncertainty** nor incentivized data collection.[5]
5. High quality NGS **investments are needed** for tumour-agnostic therapies.[6]

Figure 3 – Country landscape readiness

Figure 4 – Tumour-agnostics landscape enablers

Focus area	Enablers
Awareness & prioritisation	• Clinical and **scientific community awareness** • Discussion in **clinical associations** • **Guidance to support launch** of speciality therapies • Evolution of **guidelines for clinicians** • Existence, awareness and influence of **dedicated patient groups** • Active **governmental policies** supporting highly innovative therapies • National or regional **cancer plans** • **Integrated regulatory approval pathways** with relevant data acceptance
HTA, funding & reimbursement	• Tumour-agnostic therapies and genomic profiling **considered by HTA bodies** and payers • **Adaptive appraisal pathways** • **Evidence sources, endpoint requirements** and acceptance of models • **HTA value frameworks** and elements considered • Reimbursement and **funding mechanisms available**
Diagnostic infrastructure	• Sophisticated **centres of excellence** and tertiary centres of care • Investment in appropriate **diagnostic and data infrastructure** • **NGS, WGS and single-gene testing** protocols and reimbursement

TA = tumour-agnostics, HTA = health technology assessment, NGS = next-generation sequencing, WGS = whole-genome sequencing

Conclusion

Tumour-agnostic therapies promise significant clinical outcomes improvements, and notably **advance our understanding of mutation-specific and biomarker-driven approaches to cancer diagnosis and treatment**.

In order to move on from the current tumour-specific paradigm, increased **awareness and governmental support** are essential, as well as sophisticated **centres of excellence** and **investment** in diagnostic and data infrastructure.

Tumour-agnostic therapies will require a **profound 'mind-set' change across multiple stakeholders**, such as HTA agencies who need to re-consider how they assess value and enable adaptive appraisal pathways, to realise the promise of personalised medicine.

References

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6. iSpecimen, *Medicare to cover next-generation sequencing for cancer patients* (2018)

Notes and acknowledgements

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* The white paper titled "Preparing Health Systems For Tumour-Agnostic Treatment" can be accessed at: https://www.atkearney.de/health/article/?/a/preparing-health-systems-for-tumour-agnostic-treatment