

Access to genomic medicine illustrates precision medicine's delicate future

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Country	Hospitals	Insured Tests**
Japan	<ul style="list-style-type: none"> • 13 Designated core hospitals • 32 Core hospitals • 215 Cooperative hospitals 	<ul style="list-style-type: none"> • FoundationOne CDx • NCC OncoPanel • FoundationOne Liquid CDx • Guardant360 CDx • GenMine TOP
Switzerland	<ul style="list-style-type: none"> • University Hospital of Zürich • University Hospital of Basel • University Hospital of Lausanne • University Hospital of Geneva • University Hospital of Locarno 	<ul style="list-style-type: none"> • FoundationOne Cdx (Zürich) • Archer FusionPlex NGS (Basel) • Archer FusionPlex NGS (Lausanne) • Illumina pan-cancer fusion panel (Geneva) • Archer FusionFlex NGS panel (Locarno)

** List of insured tests for Switzerland is non-exhaustive.

Test Availability of Multigene Panel Tests in Japan and Switzerland CC BY, Nakasato K, Manz C and Kato K (2024) Access, autonomy, and affordability: ethical and human rights issues surrounding multigene panel testing for cancer in Japan and Switzerland. Credit: *Frontiers in Genetics* (2024). DOI: 10.3389/fgene.2024.1343720

As genomics and precision medicine advances open new avenues for personalized treatments to replace the conventional one-size-fits-all model, who will actually benefit from them? Paradigm shifts in disease treatment can change lives, if only people have access to them. New research has now delved into the challenge of accessing innovative care.

[In a study published](#) in *Frontiers in Genetics*, researchers at Osaka University and the University of Lausanne (Switzerland) focused on equal access, [patient autonomy](#), and affordability of genomic medicine—specifically, on multigene panel testing for cancer.

They compared the testing's status in their respective countries and found that despite 'universal' [insurance coverage](#) in both countries, barriers related to test availability, comprehensive patient information, and affordability of the entire diagnostic and treatment process are obstacles to patient access.

Multigene panel testing for cancer uses tissue or [blood samples](#) to analyze multiple genes simultaneously through next-generation sequencing technology and identify the genetic mutation causing an individual's cancer. Physicians can then tailor treatment for the patient's specific genetic makeup, thereby potentially increasing survival rates.

The researchers gathered and analyzed primary and secondary sources and found that, in Japan, multigene panel testing for cancer is offered at 260 designated hospitals, many of which are concentrated in urban areas. In Switzerland, multigene panel testing is available in major teaching hospitals, though the type of panel testing as well as the official language spoken in the area differs between hospitals. These conditions bring respective issues with rural access and potential language barriers.

The research team also pinpointed access to information for patients and insurance coverage as obstacles. In Japan, detailed patient information

on panel testing, including specific test types and processes, is available online but may not directly address individual needs.

In Switzerland, information available online tends to be overly general or, conversely, aimed at professionals. In Japan, insurance coverage for testing depends on specific criteria, such as a lack of standard cancer treatment options for the patient's [cancer](#). In Switzerland, basic insurance generally covers genomic analyses, but the tests' perceived effectiveness and necessity by the patient's physician or insurance provider can affect reimbursement.

"These are issues that require well-balanced solutions," the study's lead author Kate Nakasato says. "For example, while providing reimbursement for all patients is ideal, there is also a need to consider the sustainability of emerging technologies and the potential burden on the health care system as a whole."

"The findings of this study extend beyond Japan and Switzerland," senior author Kazuto Kato adds. "Ensuring equal access, patient autonomy, and affordable health care is crucial to the ongoing dialogue on health equality and human rights."

More information: Kate Nakasato et al, Access, autonomy, and affordability: ethical and human rights issues surrounding multigene panel testing for cancer in Japan and Switzerland, *Frontiers in Genetics* (2024). [DOI: 10.3389/fgene.2024.1343720](https://doi.org/10.3389/fgene.2024.1343720)

Provided by Osaka University

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