

Table S1      Expectations for Online Implementation of CGP

1. Expanding Access to Genomic Medicine

- Essential to ensure equal access to genomic medicine for patients with poor transportation options.
- Online is especially suitable for services that do not require repeated visits.
- Reduces physical, mental, and financial burden for patients traveling long distances.
- Online implementation may help reach patients who have not yet received CGP testing.

2. Clinical Appropriateness and Continuity

- Online consultations were already used when patients were unwell, without any sense of mismatch.
- Online CGP explanations worked well during the COVID-19 pandemic.
- Explanations and follow-up care are nearly identical whether delivered online or in person.
- Emotional cues such as facial expressions and tone of voice can still be read in online settings.

3. Ensuring Equity and Regional Needs

- Online systems should be allowed to support fairness and equal access to care.
- In non-urban areas, few physicians are capable of handling CGP; online care is therefore necessary.
- CGP access is becoming a bottleneck to downstream treatments like clinical trials.

4. Patient-Centered Efficiency

- Young patients eager to participate in trials may benefit from direct, centralized access.
- Online care may enable faster engagement with core institutions and trial sites.

Table S2      Barriers and Considerations for Online Implementation of CGP

1. Patient Eligibility and Comprehension

- Assessing eligibility (e.g., ECOG PS) is difficult without face-to-face interaction.
- Understanding of CGP differs among patients and referring physicians.
- Referring physicians from non-genomic hospitals need a basic understanding of CGP.
- Referring physicians may need to assist patients in understanding results.
- Face-to-face settings are easier for elderly patients to ask questions and communicate.
- Many elderly patients struggle with digital tools.

2. Information Delivery and Explanation Method

- In-person explanation is essential for hereditary disease results; genetic counselors should attend in person.
- Separating result disclosure and genetic counseling may reduce counseling completion.
- The treating physician should be present for result disclosure as it affects treatment decisions.
- Online consent may be unsuitable due to the volume of information to explain.
- Online consent may not be suitable for tests like tumor-normal pairs or liquid biopsies.

3. Technical and Institutional Challenges

- Institutional setup is required, making implementation difficult.
- Provides little benefit to the institution and increases burden.
- Online explanation is less efficient and does not reduce workload.

4. Security and Trust

- Confidentiality concerns exist when handling genetic data online.
- Concerns about possible recording of online sessions.
- Risk of complications or disputes exists.
- Payment disputes may arise if results are disappointing.

5. Coordination and Communication Needs

- Aligning understanding between all parties requires time and effort.
- Prefer patients visit our facility while referring physicians join online.

6. Feasibility and Current Practices

- Most referrals are from nearby hospitals, so the need for online-only explanation has decreased.
- A few in-person visits (e.g., two) are acceptable.