

# Advancing Cancer Care in Canada

## Unlocking Better Outcomes and Smarter Spending Through Genomic Profiling

Canada stands at a pivotal moment in cancer care. Lung, colorectal, pancreas, breast, and prostate cancers account for nearly 60 per cent of cancer-related deaths in Canada and represent the greatest burden of disease across the country.

**New pan-Canadian modelling shows that publicly funding comprehensive genomic profiling for these five cancers could transform cancer care – improving survival, reducing costs, and increasing societal value.**

### The opportunity: Precision that pays off

Comprehensive genomic profiling using next-generation sequencing (CGP-NGS) examines hundreds of genes in a single test, identifying mutations that drive tumour growth and revealing targeted treatment options. A single CGP-NGS test can detect a wide range of clinically actionable alterations, reducing the need for multiple assays. The result is faster diagnosis, more precise treatment selection, and better stewardship of limited tissue samples. In breast cancer, for example, CGP has been found to detect actionable alterations in 98 per cent of tumours compared to 77 per cent with hotspot panels. These gains enable more patients to receive therapies matched to their tumour biology and fewer to undergo ineffective treatment approaches.

### The impact: Lives saved, costs reduced

Between 2025 and 2030, nearly 136,000 Canadians are expected to be diagnosed with stage 4 forms of these five cancers. Our modelling compared a universal CGP-NGS funding scenario to the current mix of CGP-NGS and alternative testing.

Three of the four panels studied – Oncomine Comprehensive V3, Oncomine Precision, and AmpliSeq Focus – were less costly overall than the current standard of care, driven by reduced testing delays and elimination of sequential testing. Under a universal model, Canada could:

- save **\$715 to \$2,495 per patient** on average, with the greatest savings in colorectal and pancreatic cancers;
- add approximately **3,440 life-years** across the patient population;
- generate over **\$180 million in societal value** through individual contributions;
- keep diagnostic costs at **0.3–4.1 per cent of total treatment expenses**, demonstrating that smarter testing doesn't mean higher spending.

### The challenge: Fragmented access and misaligned systems

Despite clear benefits, access to CGP-NGS in Canada is inequitable. Ontario and British Columbia offer limited public funding, while other provinces rely on research pilots or academic programs. Barriers include:

- **fragmented real-world outcome data**
- **misaligned funding** between diagnostics and therapies
- **infrastructure gaps** in laboratory capacity, workforce training, and quality assurance

Globally, CGP-NGS is already considered standard of care in the United States and Western Europe, supported by national strategies and reimbursement frameworks. Canada's fragmented approach limits access, slows uptake, and creates inequities between jurisdictions.

## The path forward: Building a pan-Canadian framework

Canada can realize the full potential of CGP-NGS by shifting from fragmented efforts to coordinated action. Three steps can drive progress:

### 1. Enhance evidence collection

Provincial cancer agencies and care sites can strengthen real-world data collection on test performance, turnaround times, costs, and outcomes. A shared data framework would provide the evidence base for informed policy and funding decisions.

### 2. Align diagnostics and therapies

Funding mechanisms can bundle CGP-NGS tests with their companion targeted therapies, ensuring that identifying an actionable biomarker leads to funded treatment. Expanding the mandate of the pan-Canadian Pharmaceutical Alliance to include diagnostics could harmonize pricing and access nationally.

### 3. Strengthen testing capacity

Establishing centralized or regional testing hubs with standardized protocols would improve quality, reduce turnaround times, and ensure equitable access across provinces and territories. Standardization can support timely results and efficient resource use.

## A national framework for precision oncology

Current implementation is siloed. A coordinated national framework—co-developed by governments, cancer agencies, clinicians, genomics networks, industry, and patient organizations—would enable standardized data, consistent funding approaches, and measurable outcomes. This approach would align Canada with global best practices and ensure that patients benefit from advances in precision oncology, regardless of where they live.

## The bottom line

Comprehensive genomic profiling offers a powerful opportunity to deliver more targeted, cost-effective, and equitable cancer care. Publicly funding CGP-NGS for select stage 4 cancers could save lives, generate societal and system value, and position Canada as a leader in precision oncology.

For the full research, see our impact paper [\*Precision in Practice: Costs and Benefits of Comprehensive Genomic Profiling for Five Stage 4 Cancers\*](#).

