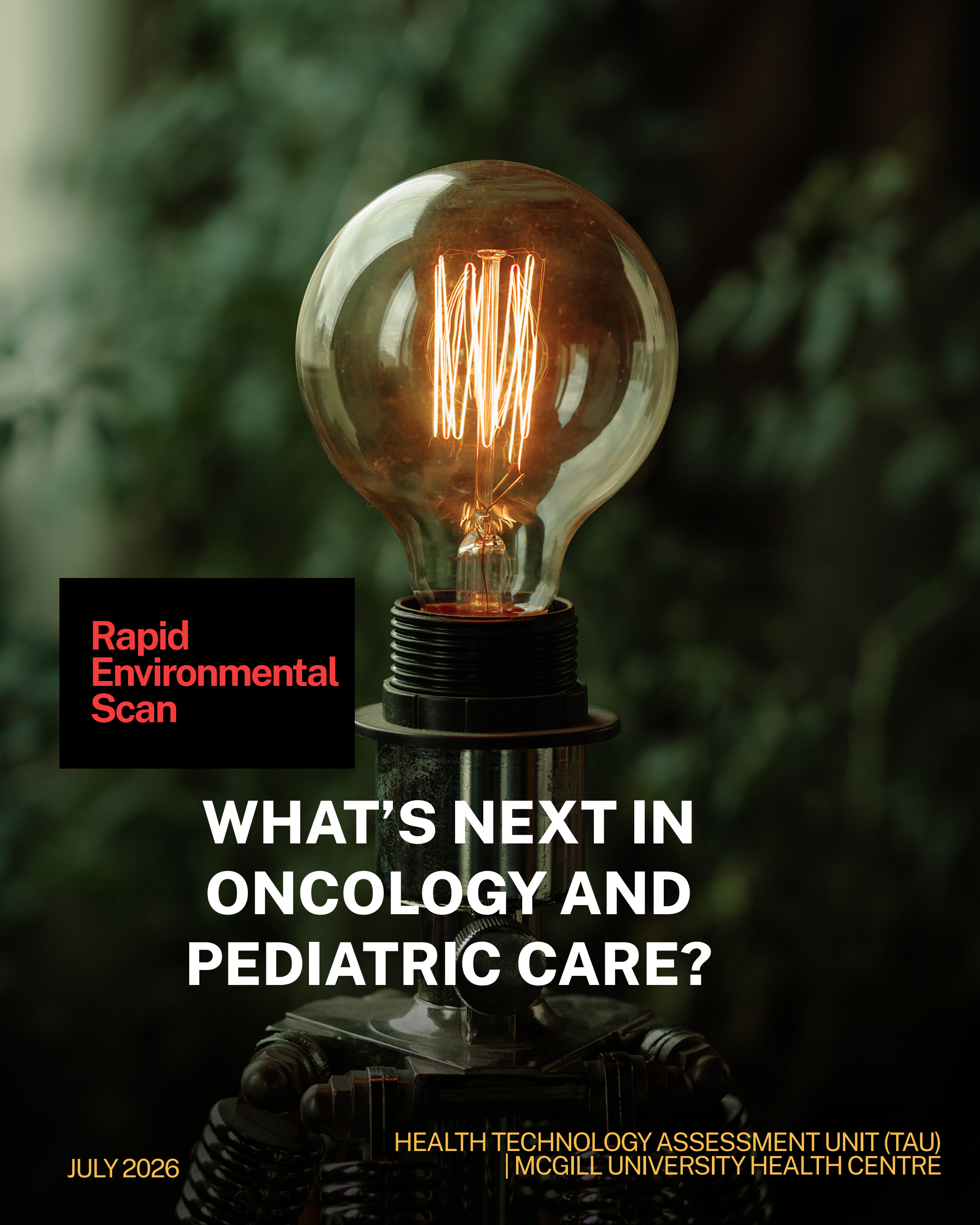




**Rapid
Environmental
Scan**

WHAT'S NEXT IN ONCOLOGY AND PEDIATRIC CARE?

JULY 2026

HEALTH TECHNOLOGY ASSESSMENT UNIT (TAU)
| MCGILL UNIVERSITY HEALTH CENTRE

Emerging Oncology Technologies



AI + Genomics: Identifying cancer-driving variants, biomarkers and potential therapeutic targets



AI-Enabled Detection & Diagnosis: Imaging, digital pathology and endoscopy



Liquid Biopsy: ctDNA and blood-based approaches for early detection, molecular profiling and monitoring



Genomic & Multi-omics Sequencing: Whole-genome, transcriptomic, long-read and single-cell approaches



Integrated Precision Oncology: Connecting diagnostics, research, clinical trials and care

The direction of travel:

From population-based approaches toward increasingly precise, data-driven cancer care.

Emerging Pediatric Technologies



Robotics & Image-Guided Intervention: New approaches to complex pediatric procedures



Gene Editing & Precision Therapeutics: Personalized approaches to treating disease



Genomic Medicine: Whole-genome sequencing (WGS), Whole-exome sequencing (WES) and other approaches to precision diagnosis and treatment



Digital & Virtual Care: Supporting children with medical complexity beyond the hospital



Integrated Complex Care: Connecting hospital, home, school and community

The direction of travel:

More personalized care, delivered across settings and increasingly supported by data and digital technologies.