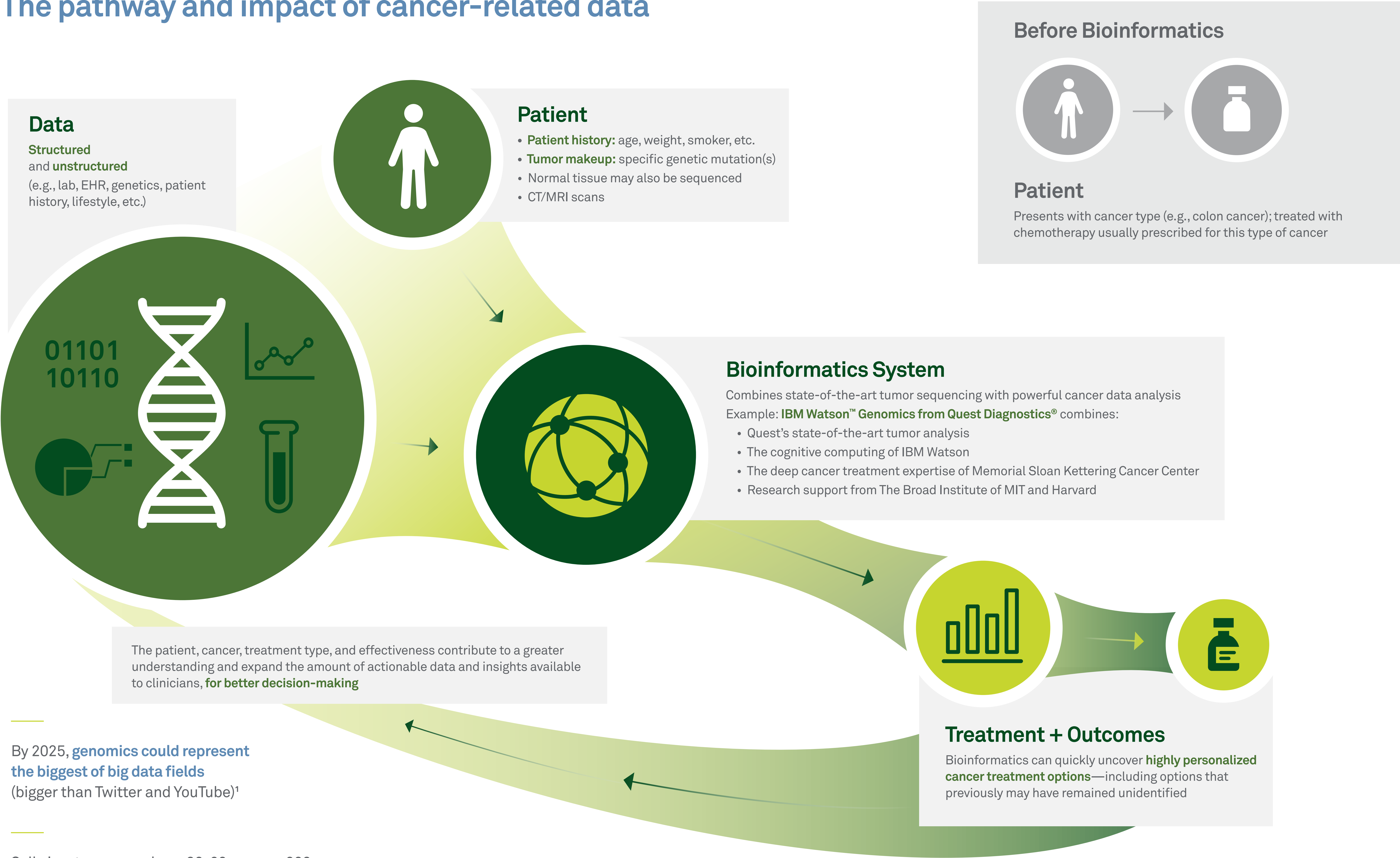


How bioinformatics is changing cancer care



Just as no two patients are alike, no two cancers are alike. Despite advances in cancer treatment, some patients still face a lack of options, especially when it comes to rare, aggressive, or late-stage disease. **Bioinformatics** is changing this, putting highly personalized cancer treatment options in the hands of clinicians. Here's how it works—and how it's transforming the way we treat cancer.

The pathway and impact of cancer-related data



By 2025, **genomics could represent the biggest of big data fields** (bigger than Twitter and YouTube)¹

Cells in a tumor may have 30, 60, or even 200 somatic mutations that can **significantly alter the proteins the mutated genes produce**²

Broad, hybrid capture-based next-generation sequencing identifies actionable genomic alterations in lung adenocarcinomas **otherwise negative for such alterations by other genomic testing approaches**³

Greater cancer insight with cutting-edge technology from Quest Diagnostics

IBM Watson Genomics from Quest Diagnostics combines Quest's state-of-the-art tumor analysis with the cognitive computing of IBM Watson and the deep cancer treatment expertise of Memorial Sloan Kettering Cancer Center. The test identifies:

Single nucleotide variants | Insertions and deletions | Copy number variations | Select rearrangements in 50 genes

References

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3. Drilon A, Wang L, Arcila ME, et al. Broad, hybrid capture-based next-generation sequencing identifies actionable genomic alterations in "driver-negative" lung adenocarcinomas. *Clinical Cancer Research*. 2015. DOI: 10.1158/1078-0432.CCR-14-2683.

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