

<u>Goal 7</u>: Develop an ethically sound learning health care information technology system for cancer that enables real-time analysis of data from cancer patients in a variety of care settings.

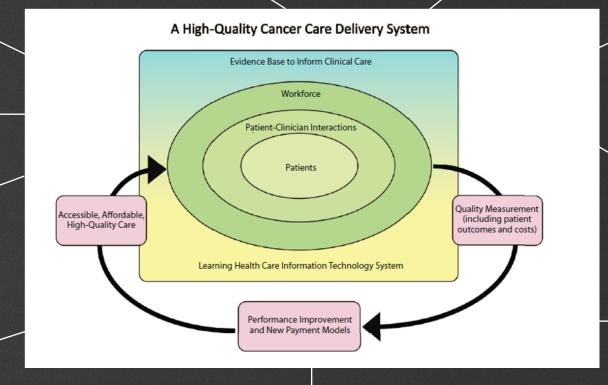
Integration w/ charting

HCO to fully employ digital systems

Digital capture of the care experience

Real-time access to knowledge

ONC, tech developers, SDOs to create core data elements for cancer CDS embedded in workflow



& order entry system

Continuously and automatically compiles data from multiple sources

HHS to support development of LHS for cancer

CMS to create incentives for clinician participation in LHS

ASCO CancerLinQ

LHS = QI, clinical effectiveness, not research

Implications re HIPAA, Common Rule

## What's gotten better since 2013



Near-universal adoption of EHRs & growth of digital health tools



Oncology-specific data standards using open-source terminologies and FHIR







Successful examples of repositories of aggregated, longitudinal oncology data for care & research (e.g., CancerLinQ, AACR Project GENIE, Flatiron, IQVIA)



Flexible data pipelines and nearunlimited cloud storage



Federal mandates for modern data transmission standards and APIs





Further growth of AI/ML including uses in NLP of free text, computational pathology, radiomics, large language models (ChatGPT)

## Continued gaps and 2023 opportunities

