Childhood Cancer Data Initiative
Surveillance Research Program (SRP)
National Childhood Cancer Registry

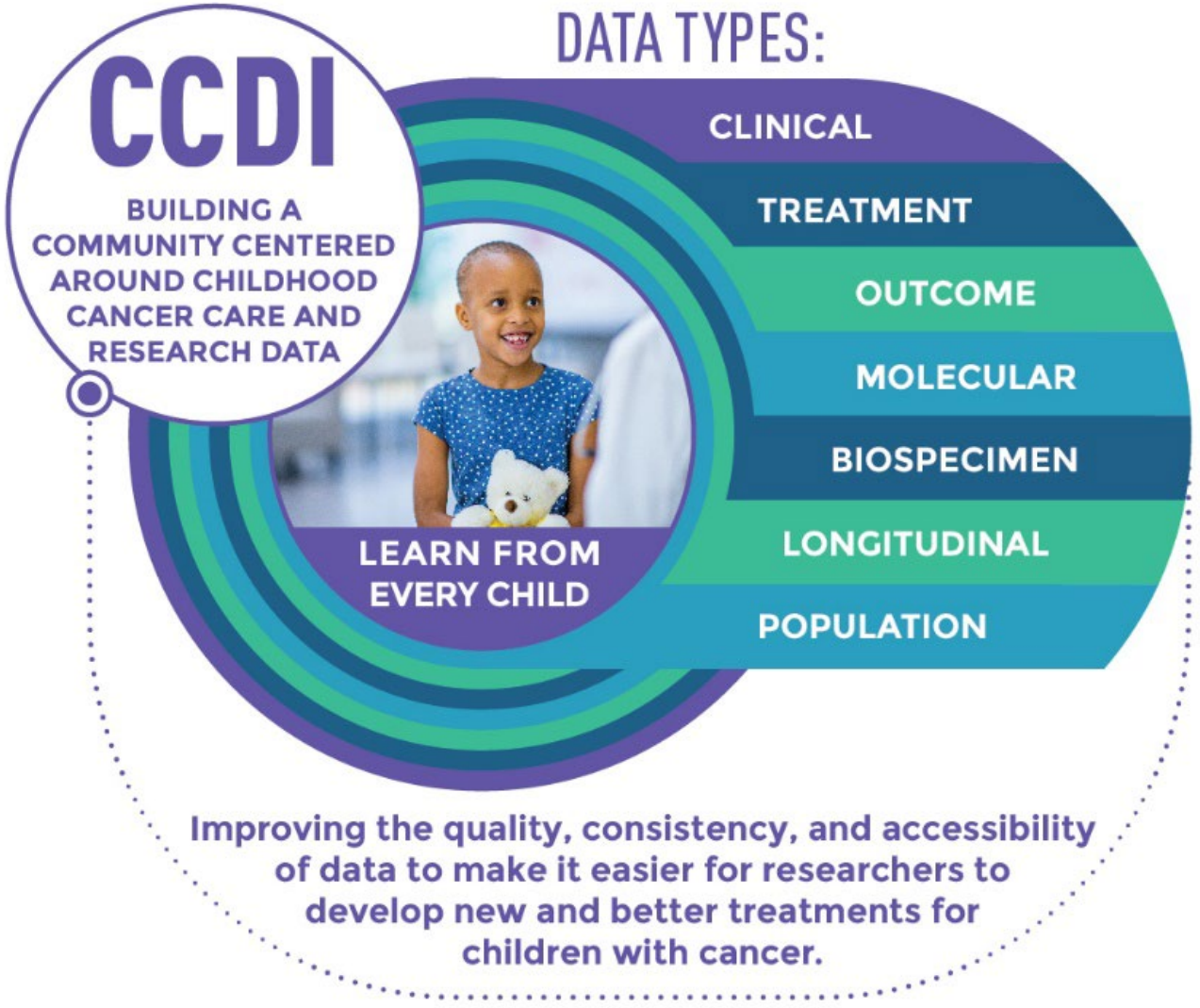
Florida Cancer Data System (FCDS) Annual Conference

August 25, 2022

NIH NATIONAL CANCER INSTITUTE

Johanna Goderre, MPH, CSPO
NCCR Technical Lead
Health Data Scientist, Surveillance Research Program

NCI's Childhood Cancer Data Initiative (CCDI)



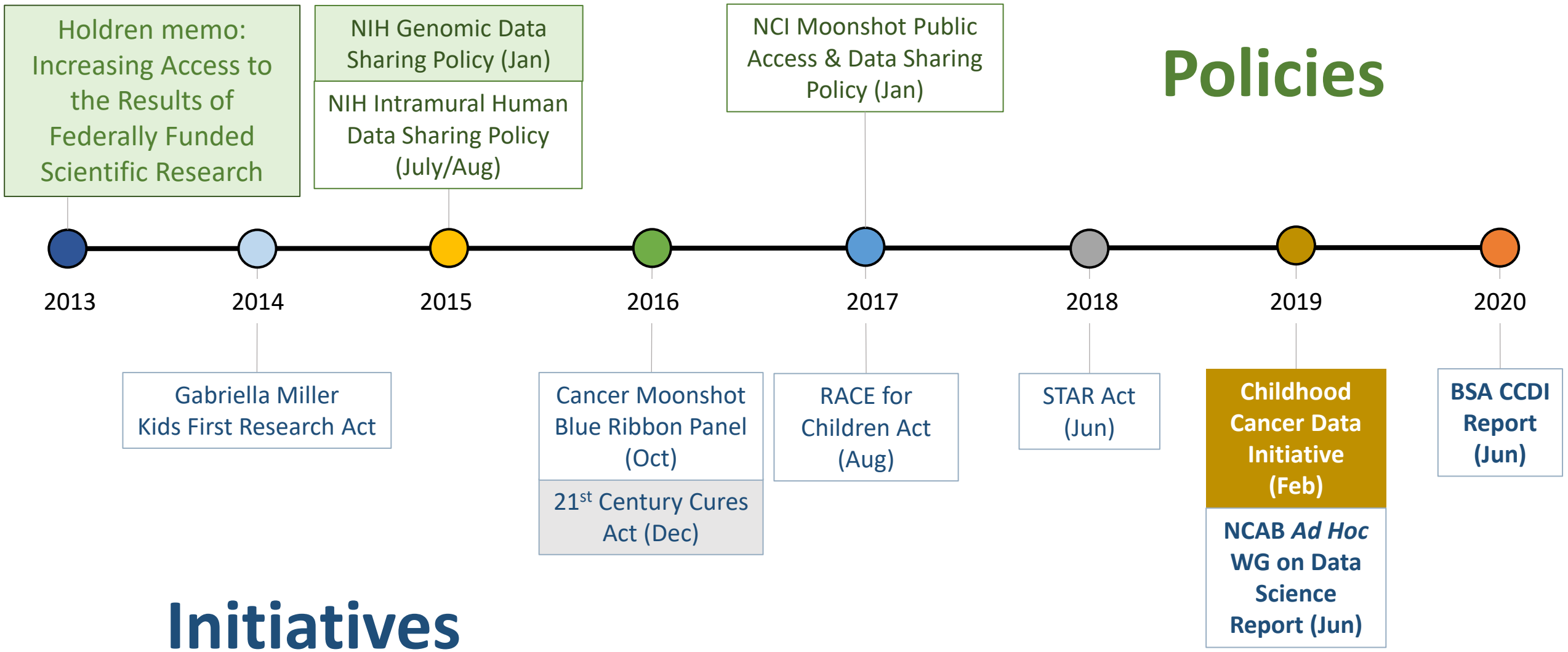
The goal of the CCDI is to build a community of

pediatric cancer researchers, advocates, families, hospitals, and networks

committed to sharing data to improve treatments, quality of life, and survivorship of every child with cancer

$50 million annual federal investment made in each fiscal year 2020 to 2030

History of Initiatives and Policy Leading up to CCDI



Childhood Cancer Data Initiative (CCDI) Symposium

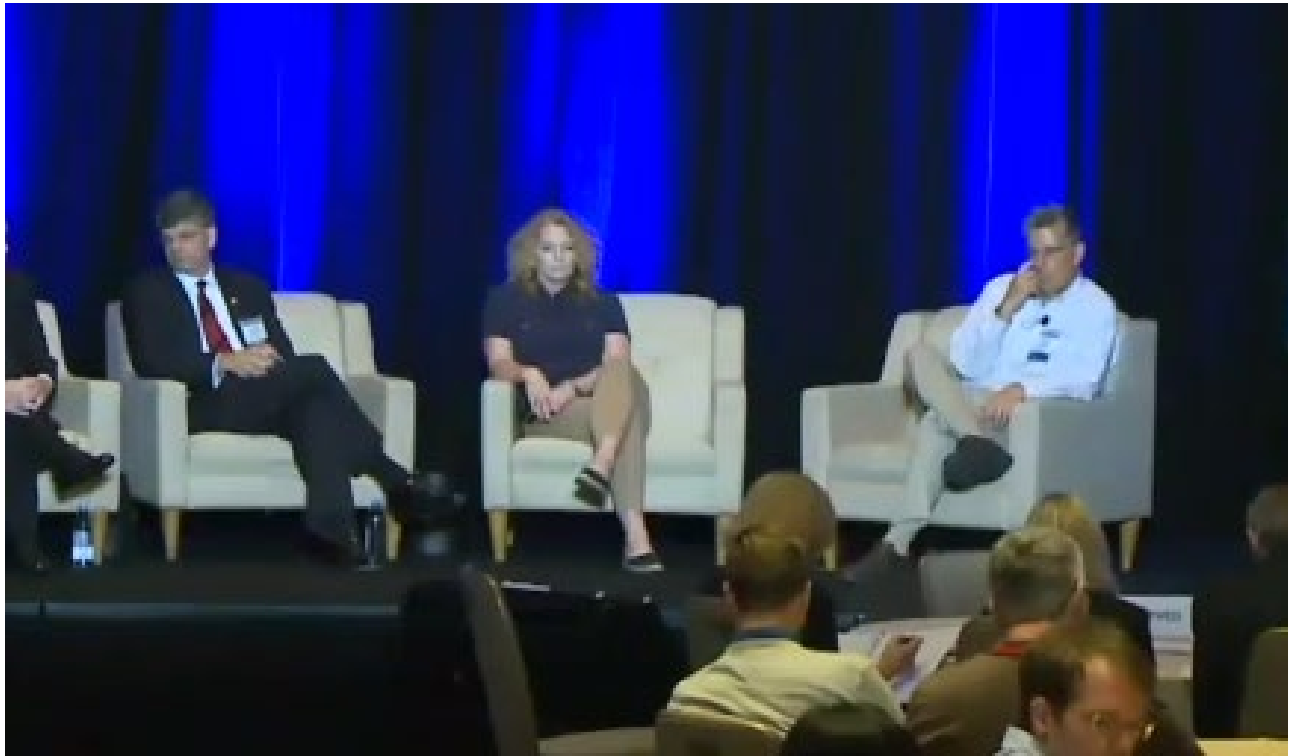
Scientific stakeholders and leaders from academia, government, industry, and advocacy organizations gathered in Washington, DC, July 29–31, 2019, for the NCI Childhood Cancer Data Initiative (CCDI) Symposium—a scientific meeting to gain a common understanding of the current issues and opportunities in childhood cancer research that can be addressed through enhanced data collection and maximum utilization of that data.

https://www.cancer.gov/research/areas/childhood/childhood-cancer-data-initiative/symposium

Watch Recordings of the Symposium

Day 1: Monday, July 29, 5:00 p.m. - 7:30 p.m.

Day 2: Tuesday, July 30, 8:30 a.m. - 12:30 p.m.



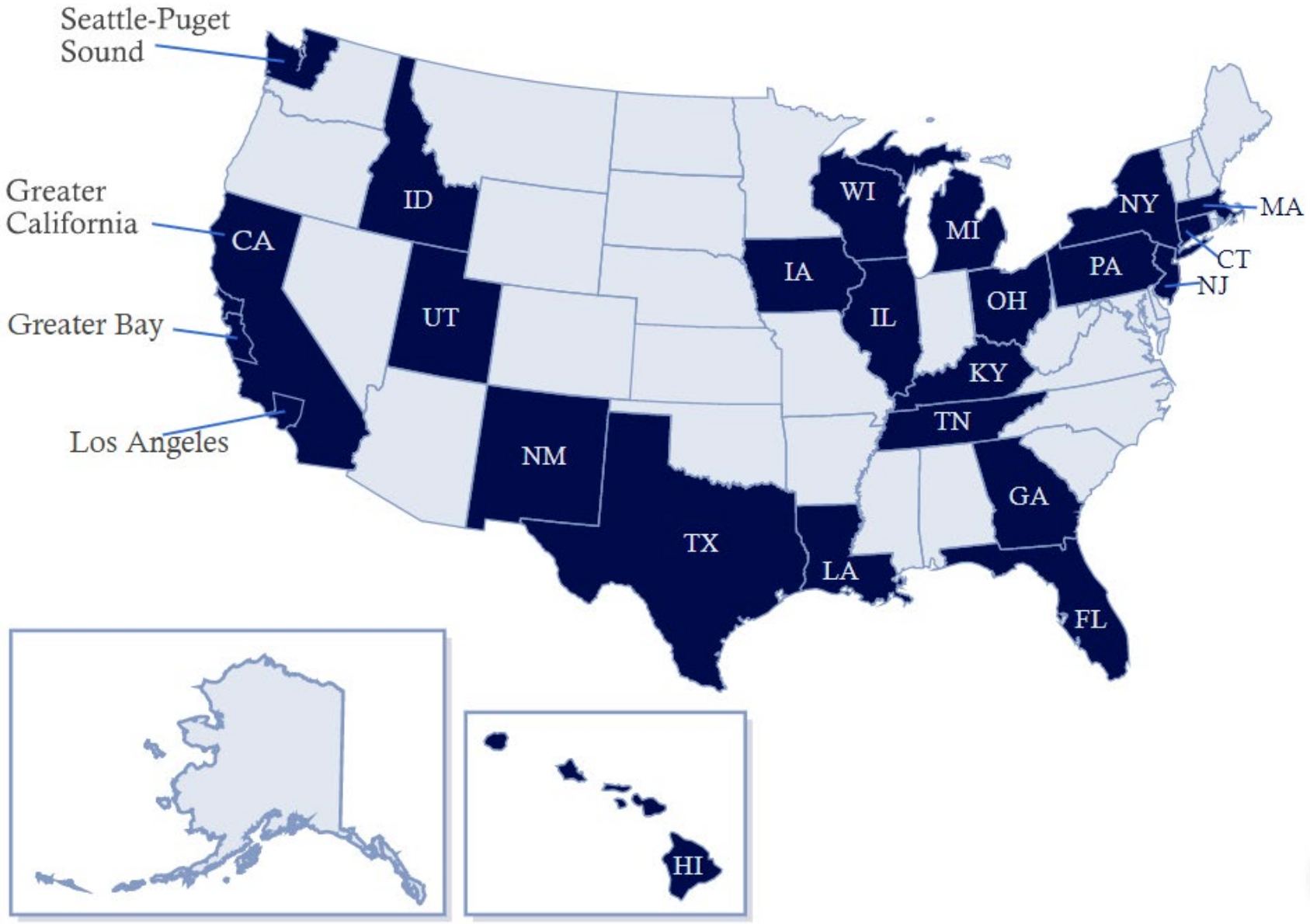
June 2020 CCDI Board of Scientific Advisors Working Group Report

24 specific recommendations

- Landscape of Pediatric/AYA Cancer Research Data & Needs Analysis
- Types of Data for Collection and Aggregation
- Potential Barriers to Progress
- Generating New Data
- Distinction Between Research & Clinical Data
- Engaging Diverse Array of Stakeholders for Input
- Potential Opportunities for Transformative Discoveries

CCDI --> National Childhood Cancer Registry (NCCR)

Central Cancer Registries participating in the NCCR



National Childhood Cancer Registry

Approximately 16,000 childhood cancer patients are diagnosed in the United States annually, compared with the 1.8 million new cancer cases among all ages.

Initial Registry Participation = ~70% of US population

All childhood cases from registries (0-19 at diagnosis and expanding to <40; 1995+)

Consolidate and standardize data in a single infrastructure

Analyze and share data, in a controlled access environment, to gain insight

Data Domains:

- Longitudinal Treatment, Procedures, Outcomes
  (including pharmacy data, radiation oncology, claims, radiology, vital status)
- Social Determinants of Health
  (including financial toxicity, residential history)
- Clinical Trials, Survivorship Studies, Biospecimen or Tissue Location
- Tumor and Germline Molecular Characterization

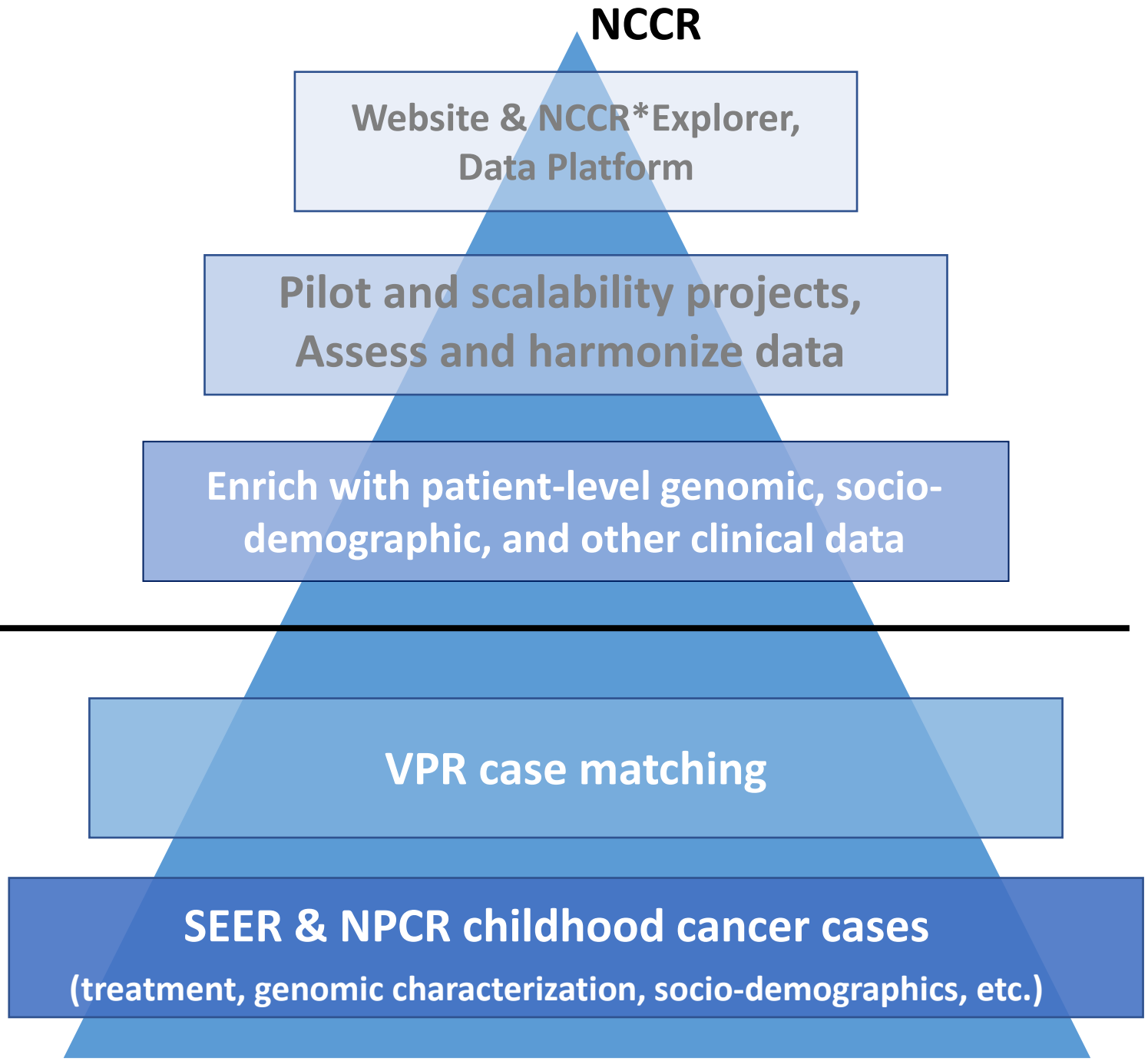
CCDI National Childhood Cancer Registry

- Leverage and link disparate data from multiple sources to create an infrastructure that can better support surveillance and research on childhood cancer
- 24 central cancer registries, including 5 NPCR (MI, PA, TN, OH, FL)
- Core data derived from cancer registries- but extended and expanded to include additional relevant information such as
  - Detailed treatment
  - Genomic characterization
  - Trajectory of care from diagnosis throughout life including
    - Multiple primary cancers
    - Recurrent disease
  - Other relevant factors related to risk and outcome (residential history, SDOH etc.)
- Integrate within modern CCDI federated data ecosystem
- Include data on a broader set of patients than covered in COG facilities
  - Potential disparities in who is seen/treated in COG systems
  - Preliminary data estimating proportion of patients seen at COG facilities in SEER: 65-77% overall

- Communicate progress!

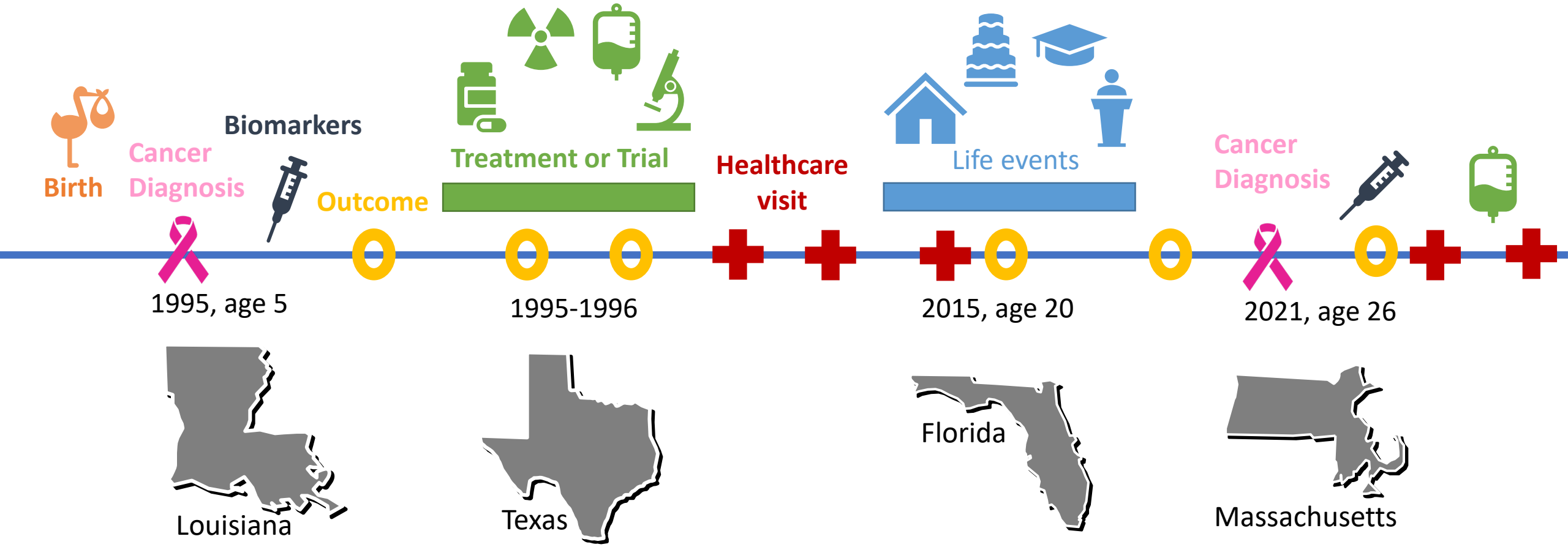
- Pilots like Birth Records, Whole Slide Imaging, Medicaid
- Other efforts to improve data quality and resources with CDC, HemOnc.org, DOE

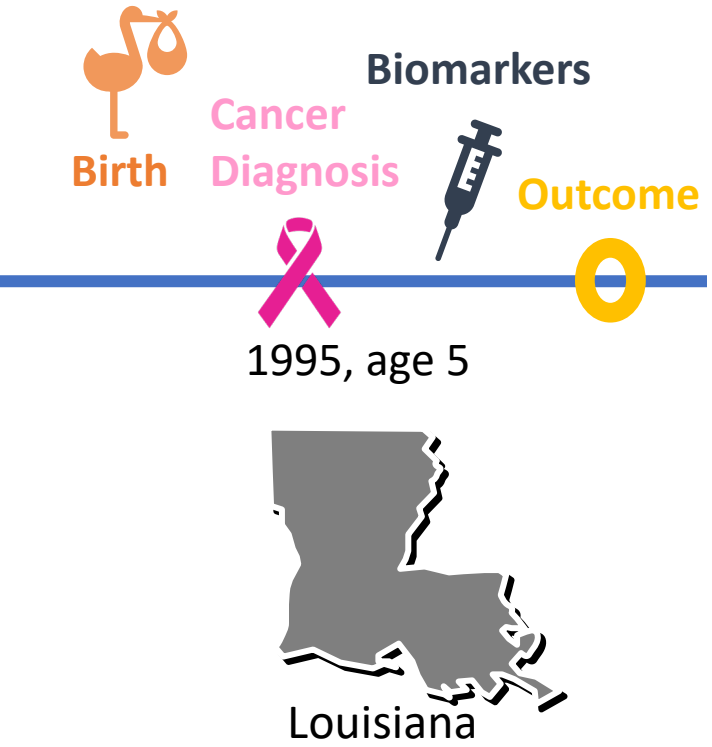
- Linkages from detailed, non-registry sources like Cancer Centers, COG, Pediatric Proton/Photon Registry

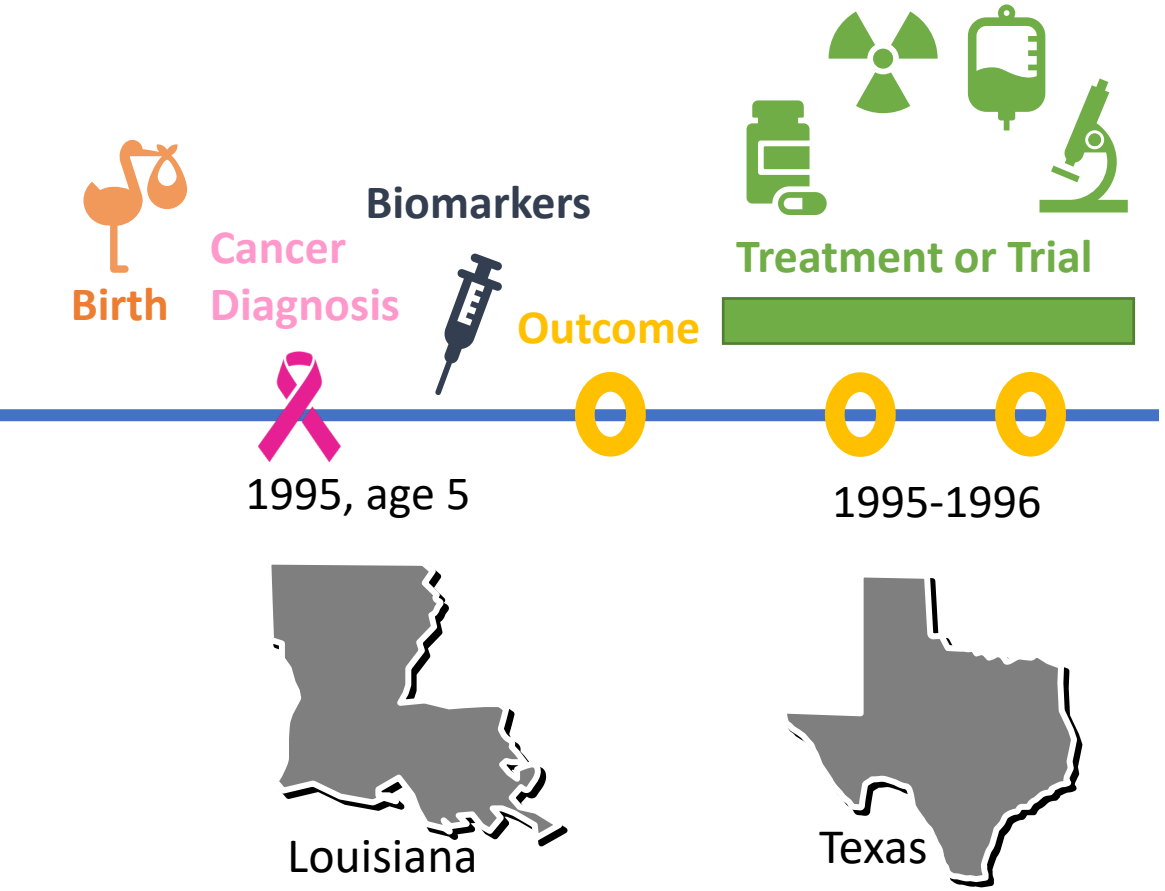


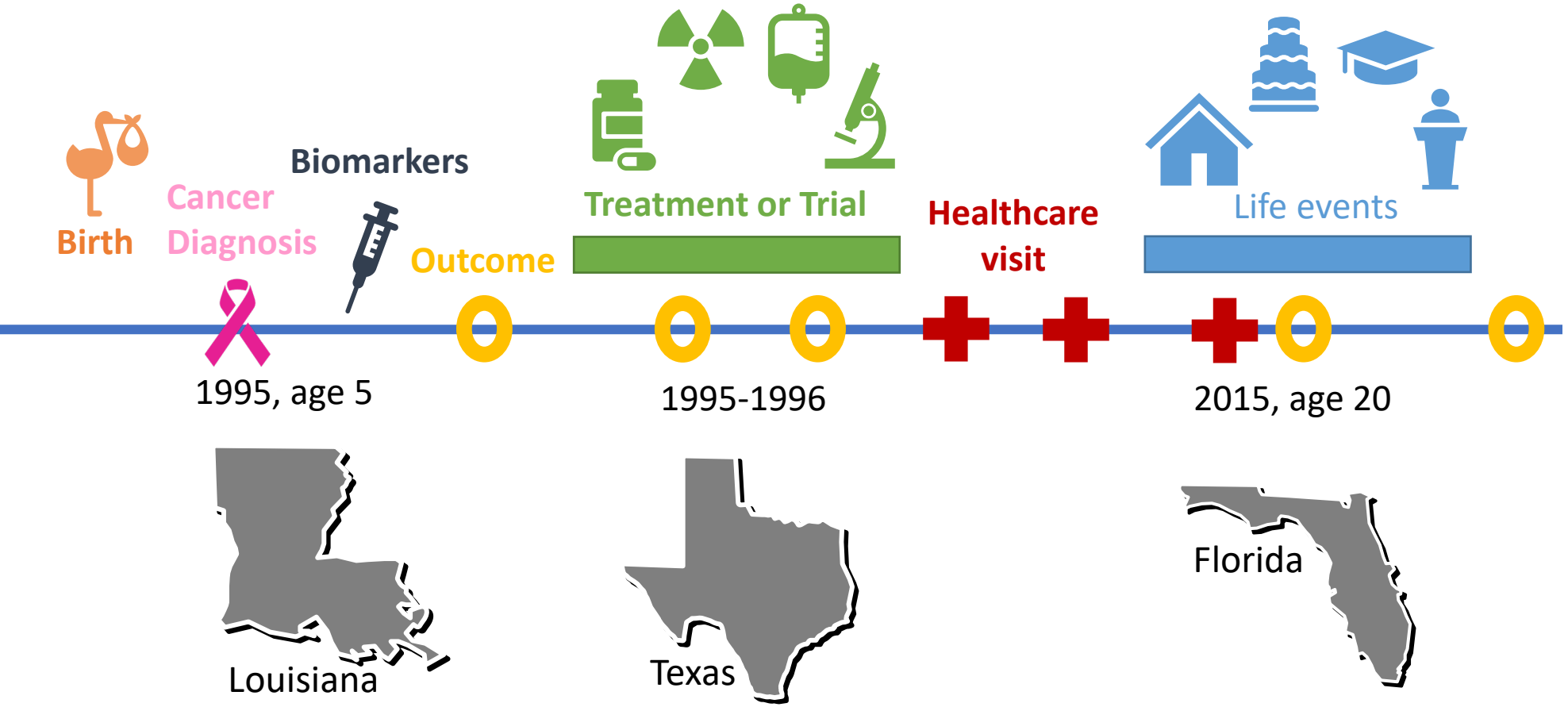
Census of all childhood cancer cases

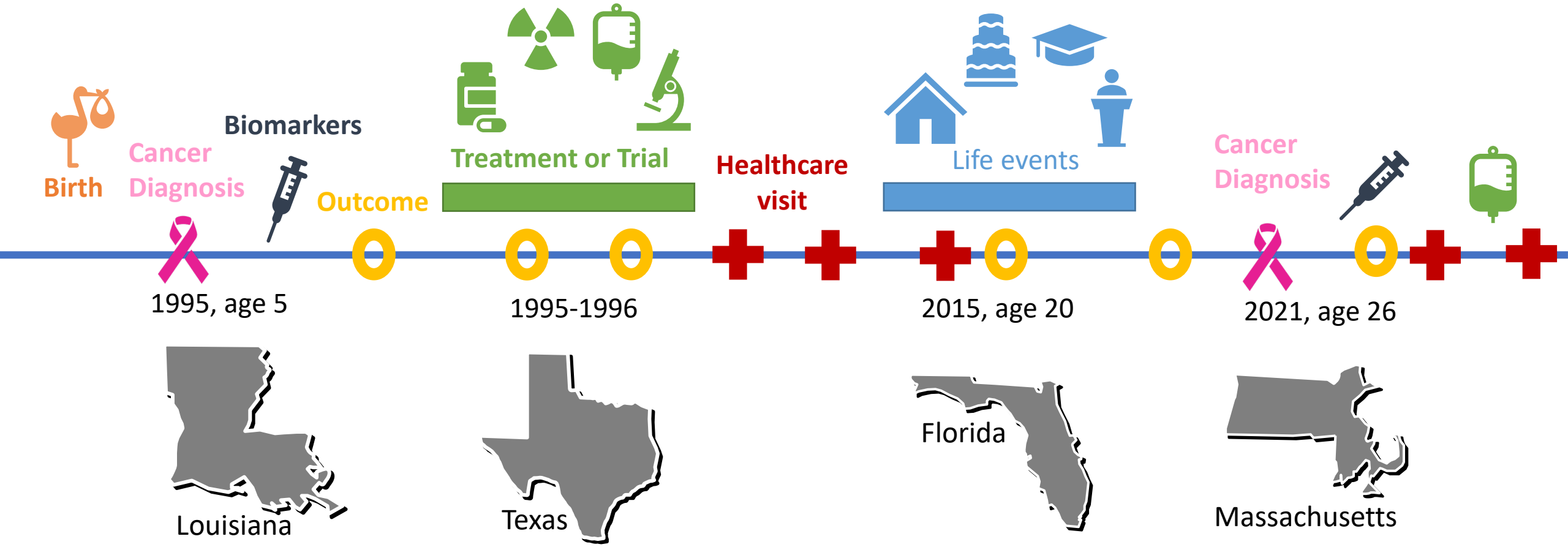
- NAACCR Virtual Pooled Registry
  - De-duplication & longitudinal matching
  - 9 states in 2022
  - Enable survivorship studies
- High-quality PII/PHI-based matching of individuals across many data sources
- Rich data from SEER registry abstracts (since 1995; expanding to <40 year-olds)


Birth
Cancer Diagnosis
Biomarkers
Outcome
Treatment or Trial
Healthcare visit
Life events
Cancer Diagnosis
1995, age 5
1995-1996
2015, age 20
2021, age 26
Louisiana
Texas
Florida
Massachusetts

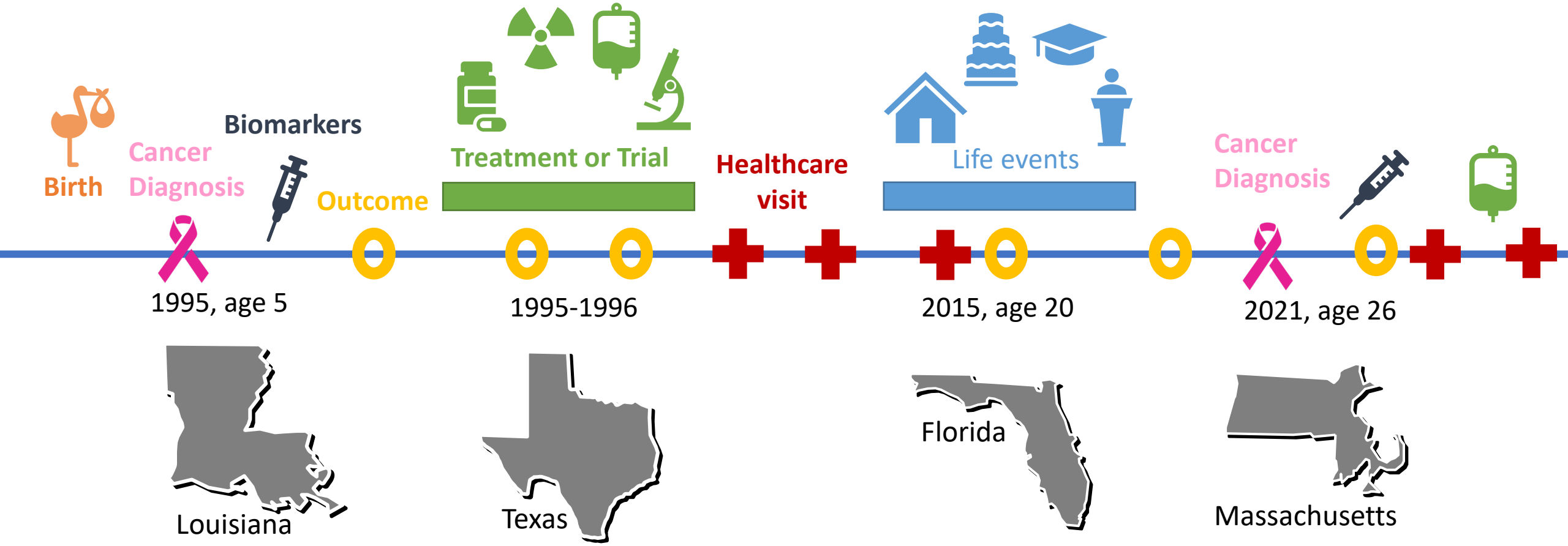

Biomarkers
Cancer Diagnosis
Birth
Outcome
1995, age 5
Louisiana

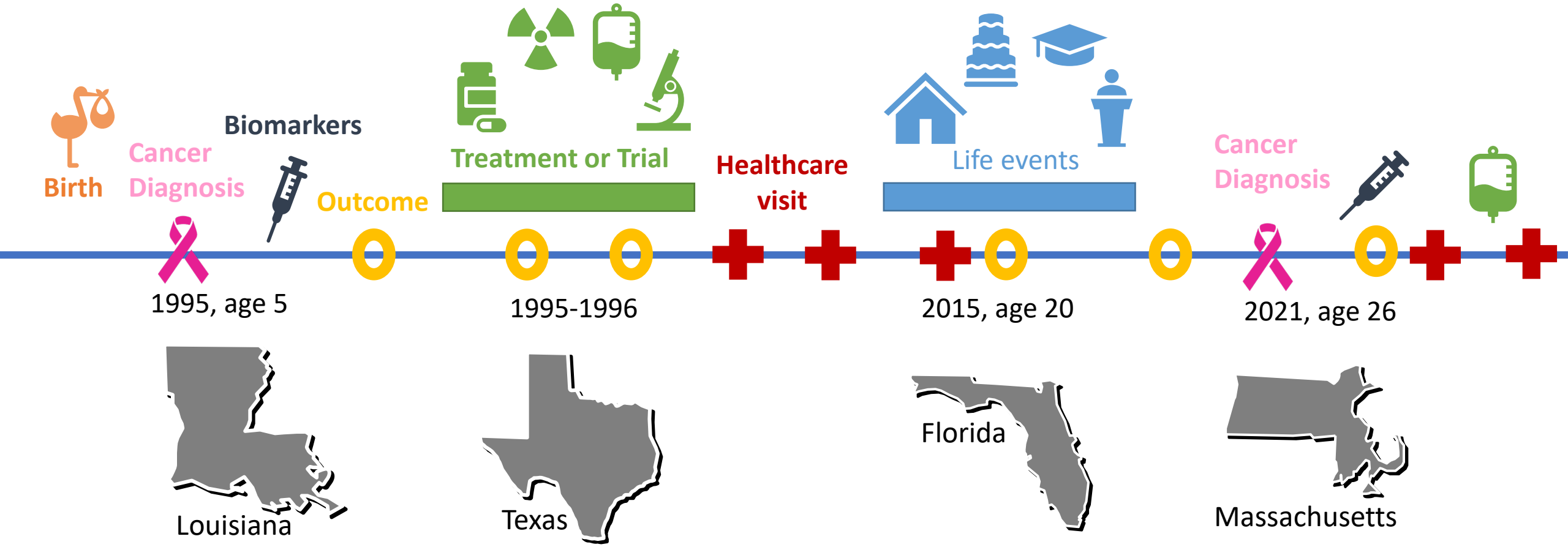

Birth
Cancer Diagnosis
Biomarkers
Outcome
Treatment or Trial
1995, age 5
1995-1996
Louisiana
Texas


Birth
Cancer Diagnosis
Biomarkers
Outcome
Treatment or Trial
Healthcare visit
Life events
1995, age 5
1995-1996
2015, age 20
Louisiana
Texas
Florida


Birth
Cancer Diagnosis
Biomarkers
Outcome
Treatment or Trial
Healthcare visit
Life events
Cancer Diagnosis
1995, age 5
1995-1996
2015, age 20
2021, age 26
Louisiana
Texas
Florida
Massachusetts

Enrich with patient-level genomic, socio-demographic, and other clinical data





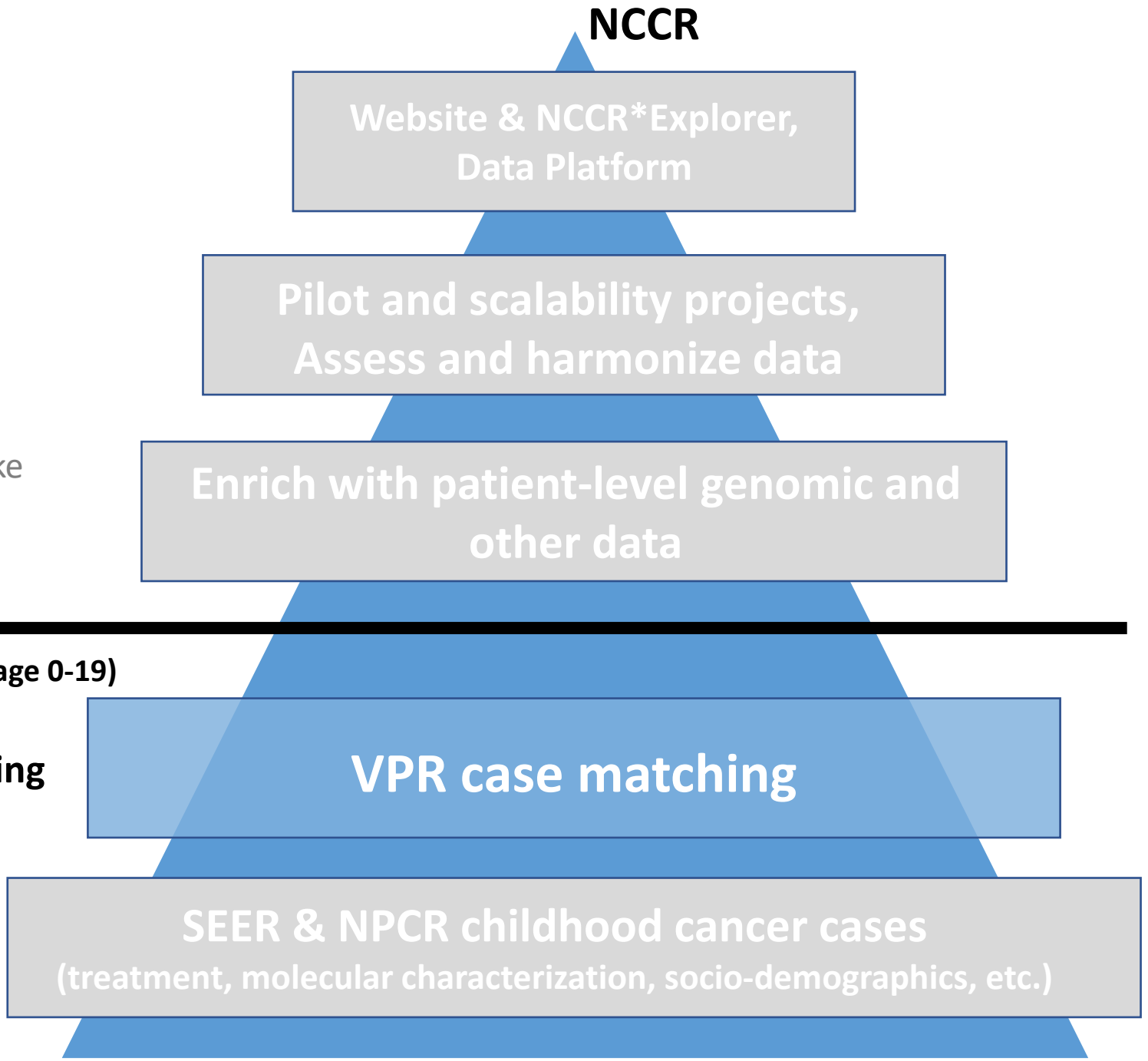
Infrastructure that allows us to accurately identify and match patients over time

CCDI > NCCR > NAACCR Virtual Pooled Registry (VPR)

- Communicate progress!

- Pilots like Birth Records, Whole Slide Imaging, Medicaid
- Other efforts to improve data quality and resources with CDC, HemOnc.org, DOE

- Linkages from detailed, non-registry sources like Cancer Centers, COG, Pediatric Proton/Photon Registry

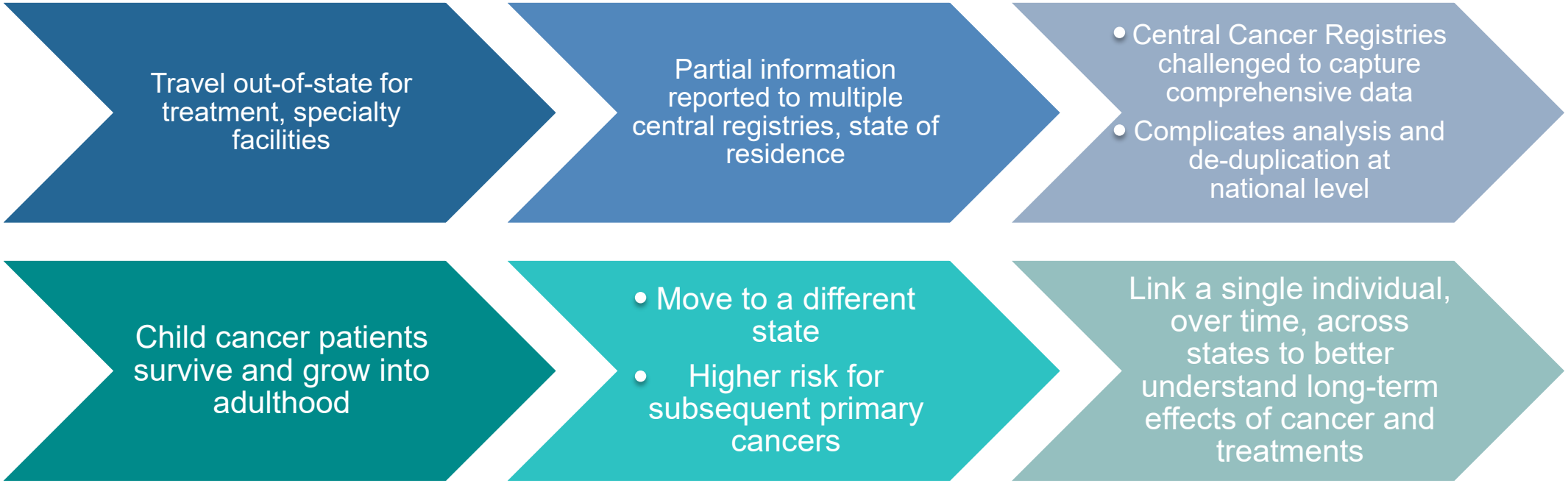


Census of all childhood cancer cases (age 0-19)

- **Virtual Pooled Registry NAACCR**
  - **De-duplication & longitudinal matching**
  - **9 states in 2022**
  - **Enable survivorship studies**
- High-quality PII/PHI-based matching of individuals across many data sources
- Rich data from SEER registry abstracts (since 1995; expanding to <40 year-olds)

NCCR & Virtual Pooled Registry

Why?



- VPR includes 43 central cancer registries who have agreed to perform linkages with clearly defined cohorts
  - Public health surveillance activity that enables identification, matching, and counting of primary and subsequent neoplasms among children and later in life
  - Obtain true incidence patterns
  - Measure the true risk of subsequent primaries and late effects of treatment

NCCR & VPR – Next Steps

- Complete linkage between registries in NCCR and VPR
- Enable better linkage of patients across registries and improve data quality by sharing case information
- Quality control to improve identification of subsequent primaries

Opportunities to use NCCR data under CCDI

Better understand disparities in care

Children with cancer have complicated patterns of care in the US:

- Children's Oncology Group (COG) runs the majority of clinical trials for pediatric cancer
- COG facilities provide state-of-the-art care, however:
  - 60% of patients age <29 enroll in trials
  - Prior studies report trial enrollment varies by age and cancer site
- **What patients are not seen at COG facilities?**

Solutions:

- Evaluate registry data for evidence of care received in COG facilities
- Link with COG data and understand disparities in access to care

https://www.childrensoncologygroup.org/clinicaltrials-136

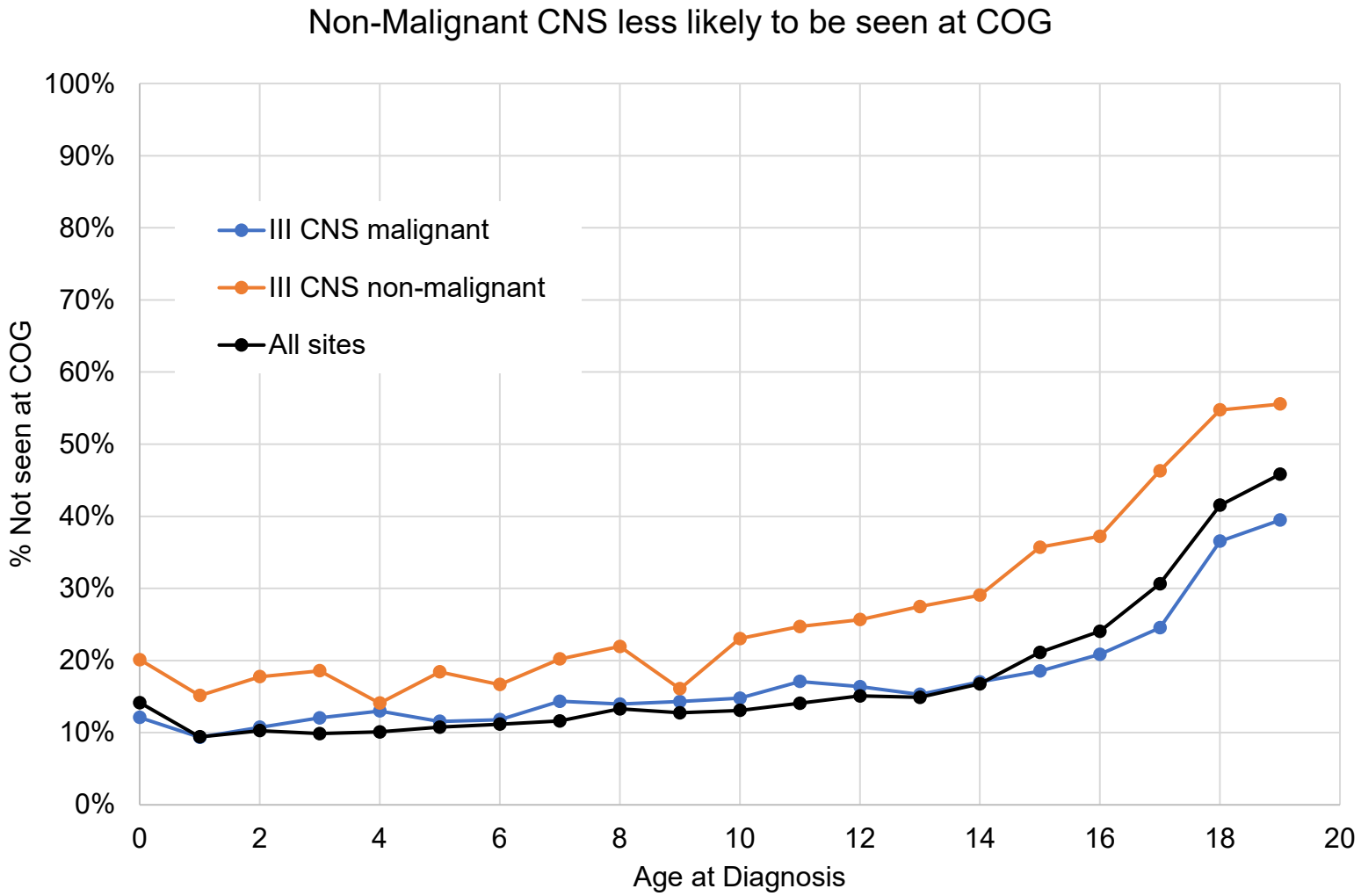
Liu, 2003 PMID: 12599243; Faulk, 2020 PMID: 32324751

Results from SEER evaluation on visiting COG facilities

Approximately 75-80% of 73,400 patients <20 years old had least 1 visit to a COG facility from 2000 to 2018 in 13 SEER registries.

Patients not seen at COG facilities are:

- Older (aged 15-19)
- Female
- Black
- With certain cancer sites (CNS Non-Malignant) less likely to be treated at these state-of-the-art centers



COG Coverage – Next Steps

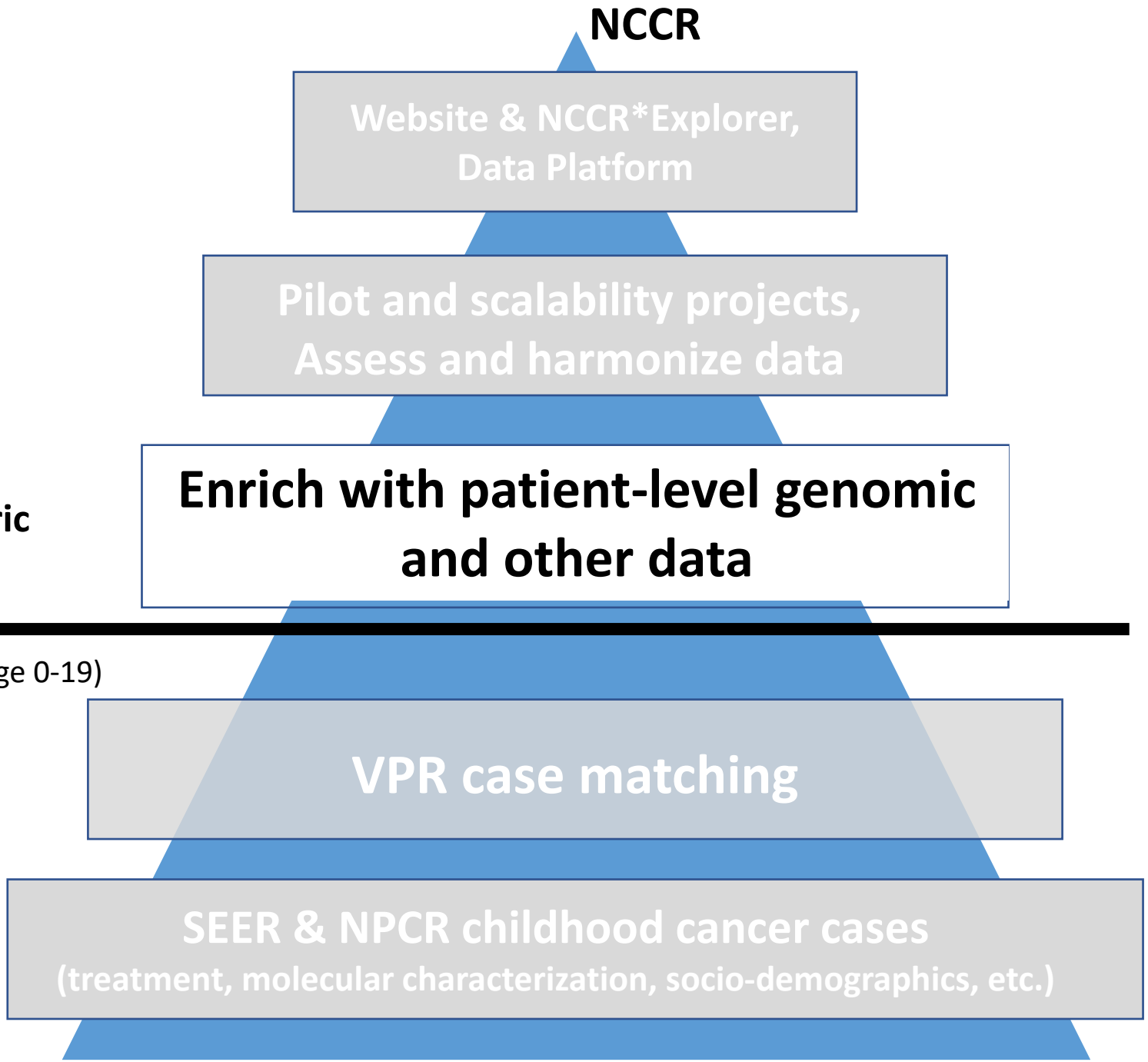
- Complete linkage with COG
  - Quality assurance assessment
- Conduct analyses looking for demographic, geographic, and other disparities:
  - Proportion of patients seen at COG facilities (whether enrolled in trials or not)
  - Proportion of patients enrolled in trials at COG facilities
  - Identify population subgroups not well covered by COG

CCDI > NCCR > Direct Linkages to data providers

- Communicate progress!

- Pilots like Birth Records, Whole Slide Imaging, Medicaid
- Other efforts to improve data quality and resources with CDC, HemOnc.org, DOE

- **Linkages from detailed, non-registry sources like Cancer Centers, COG, Pediatric Proton/Photon Registry**

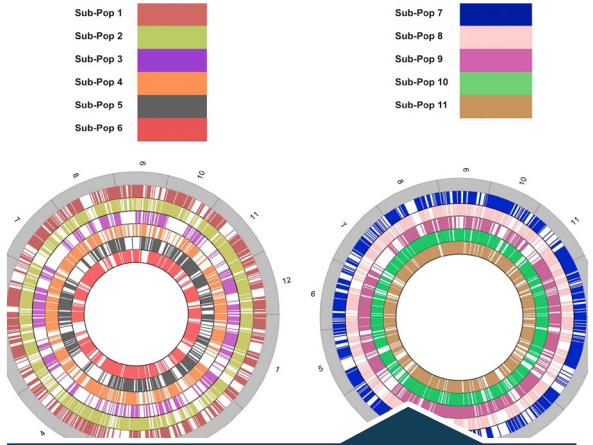


Census of all childhood cancer cases (age 0-19)

- Virtual Pooled Registry NAACCR
  - De-duplication & longitudinal matching
  - 9 states in 2022
  - Enable survivorship studies
- High-quality PII/PHI-based matching of individuals across many data sources
- Rich data from SEER registry abstracts (since 1995; expanding to <40 year-olds)

Important Categories of Data for CCDI from NCCR Cancer Centers

Clinical, treatment, and outcome data from clinical trials and the EHR



Molecular data including research sequencing and clinical molecular profiling

Availability and location of biospecimens, including germline and tumor DNA

Longitudinal population data from patients and survivors

https://deainfo.nci.nih.gov/advisory/bsa/sub-cmte/CCDI/CCDI%20BSA%20WG%20Report_Final%20061620.pdf

NCCR Linkage Process

- Strategic assessment of potential data providers
- Develop a protocol
- Data providers approve protocol
- Participating registries approve protocol (ranging from 23-33 registries)
  - May require IRB modification
  - Review and approval for data release by registries
  - DUAs for each registry and each linkage
- Linkage
  - Depending on personally identifiable information, may require significant manual validation (e.g., COG)
  - Evaluate patient matching and data quality (completeness, accuracy etc.)
  - De-identified data submitted to NCCR Data Platform

CVS, Walgreens, RiteAid, Medicaid, Unlimited, United Healthcare

Linkages Complete, Data under Evaluation, Planning for updated data

Data Domain	•Medical and Pharmacy Claims 
Importance	•Improve longitudinal matching •Increase knowledge of comorbidities, treatment, recurrence
Data Details	•Date of prescription, medication information; Date of service, diagnosis codes, procedure codes, medication or treatment information

LexisNexis

Ongoing, prior linkages in use already

Data Domain	•Address History
Importance	•Improve accuracy of longitudinal matching for children who move or change names over their lifespan •Link cases when patients move
Data Details	•Address history since 1995 matched to address at diagnosis •SEER saw success in adults and increased match rates •Identify adults with the same address as child's at diagnosis

Enhanced data from Cancer Centers and Hospitals

Some Linkages Complete, Others In Process

Data Domain	•Real-world clinical data 
Importance	•Increase knowledge of comorbidities, treatment, recurrence, biomarkers, radiology and pathology reports, outcomes, comorbidities
Data Details	•Date of service, diagnosis codes, procedure codes, medication or treatment information (Chemotherapy, dose, dates; Radiation site, dose, fractions) •Gene, variant, structural rearrangements •Site, histology, grade, stage •Survivorship, family studies information

Children's Oncology Group clinical trials database (2007-2017; 2015-current)

Linkage in process now

Data Domain

- Clinical Trial Enrollment
- Address History
- Pathology Report

Importance

- Improve longitudinal matching
- Clinical trial participation and coordination with COG
- Detailed pathology, patient demographics, diagnosis

Data Details

- Patient and parent address and patient demographics
- ICD-O histology, behavior, topology; Stage; Diagnosis date
- Trial enrollment
- Consent for recontact studies

State Health Department Birth Records

Summer 2022

Data Domain

- Parental Address History
- Potential risks to develop cancer from around the time of birth related to geography or other factors

Importance

- Improve accuracy of matching prior to child's cancer diagnosis and capture parent names
- Well-established gestational and perinatal risk factors for childhood cancer
- Less-established risk factors in need of further study

Data Details

- Parent names, subsequently linked to parent's LexisNexis address history
- Birth weight, parental age, mode of birth, parental smoking, maternal obesity

Pediatric Proton and Photon Consortium Registry (PPCR)

Fall 2022

Data Domain

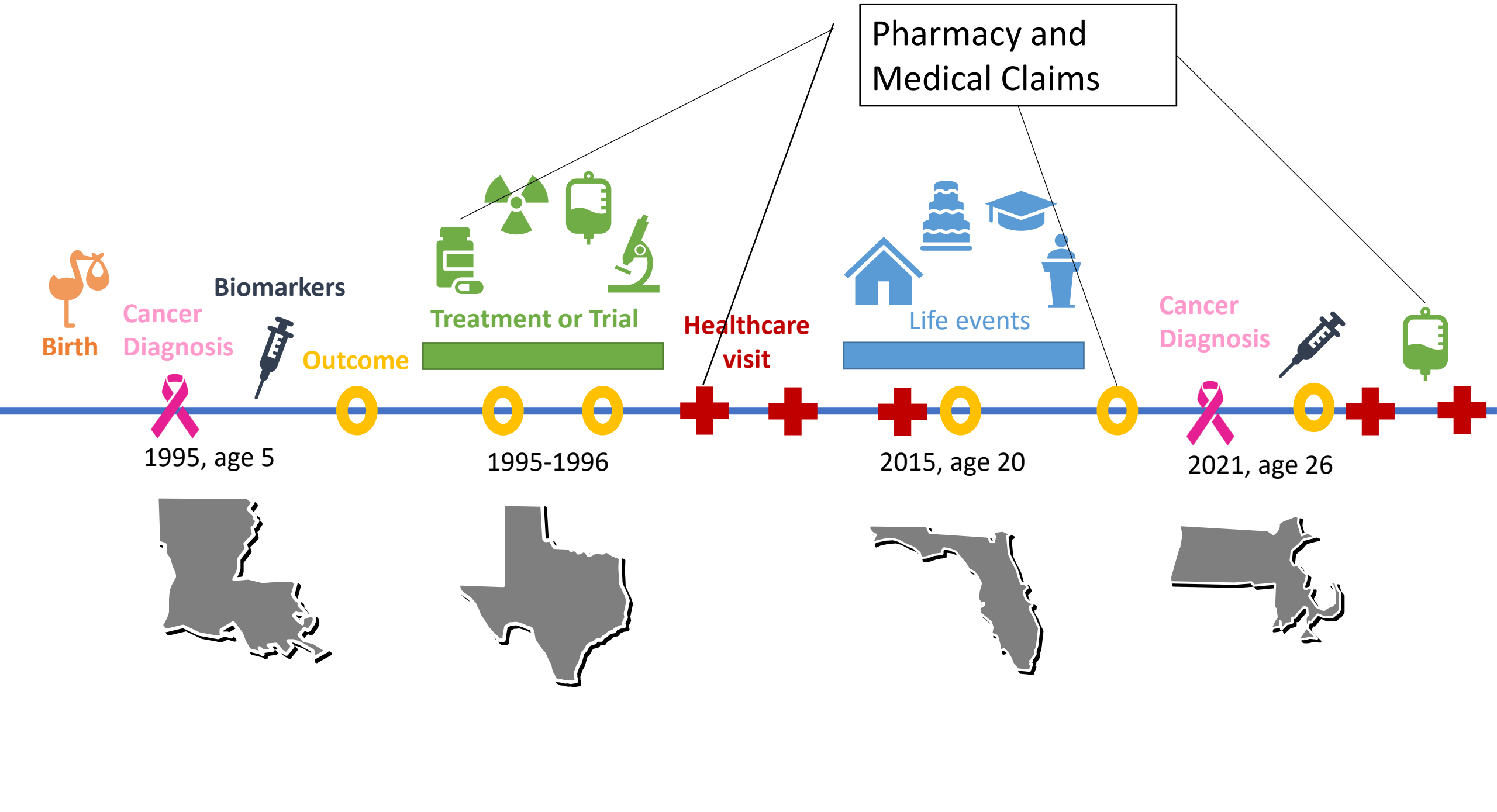
- Clinical research
- Detailed treatment
- Outcomes

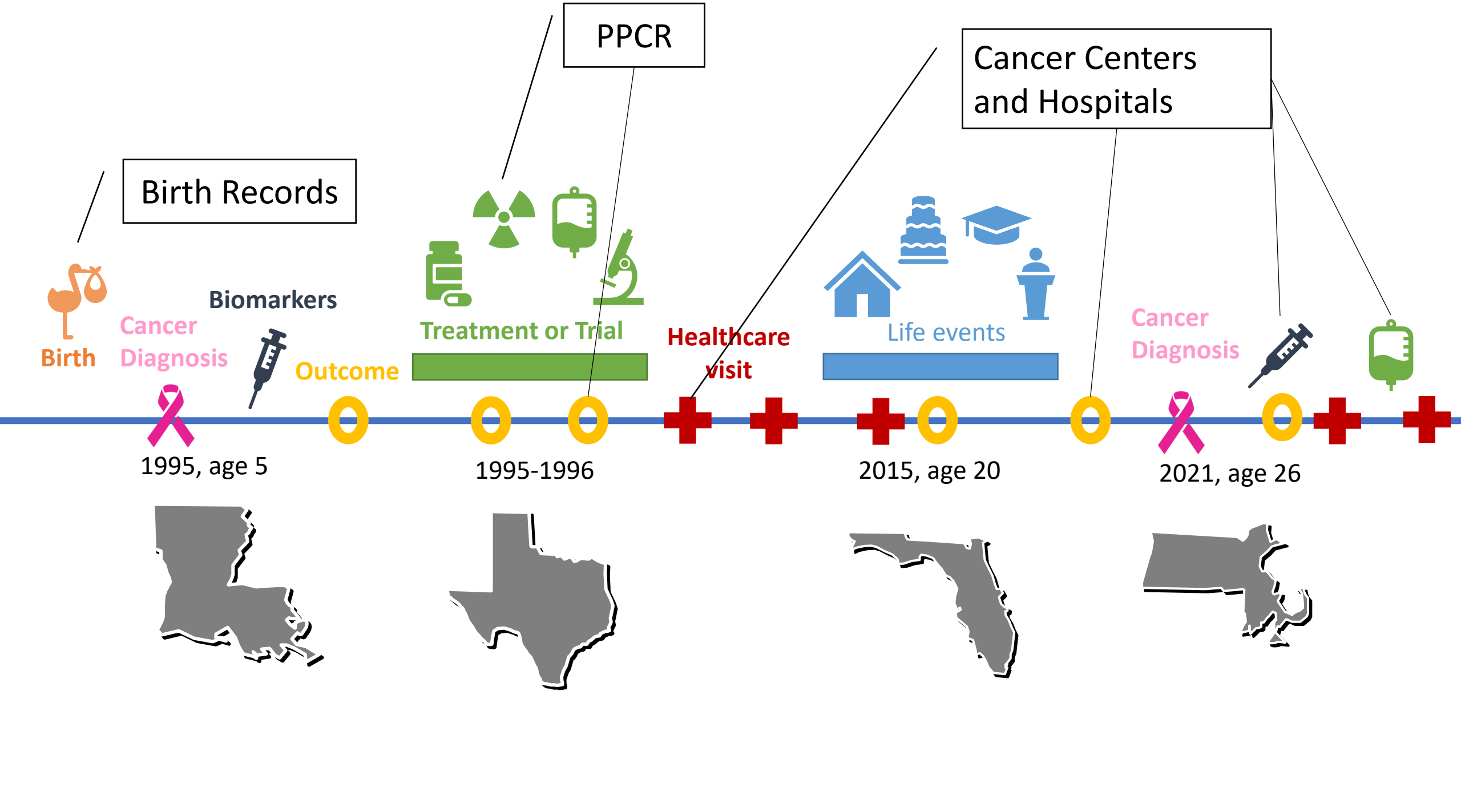
Importance

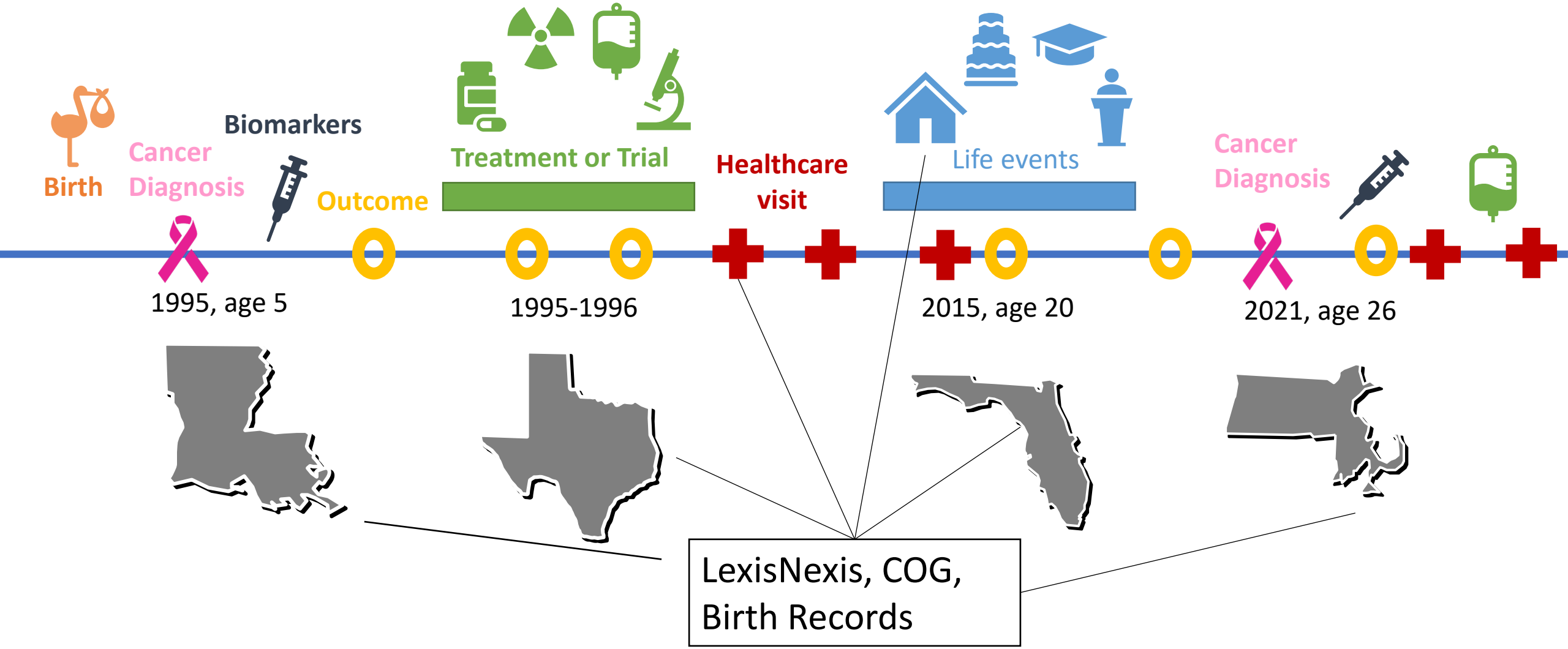
- Increase knowledge of treatment
- Improve capture and standardization of radiotherapy
- Reduce manual abstraction
- Improve knowledge of adverse outcomes like secondary malignancies and late effects

Data Details

- Comprehensive data on disease, treatment, and clinical outcomes of pediatric cancer patients receiving any radiation modality


Pharmacy and Medical Claims
Birth
Cancer Diagnosis
Biomarkers
Outcome
Treatment or Trial
Healthcare visit
Life events
Cancer Diagnosis
1995, age 5
1995-1996
2015, age 20
2021, age 26


PPCR
Cancer Centers and Hospitals
Birth Records
Biomarkers
Birth
Cancer Diagnosis
Outcome
Treatment or Trial
Healthcare visit
Life events
Cancer Diagnosis
1995, age 5
1995-1996
2015, age 20
2021, age 26

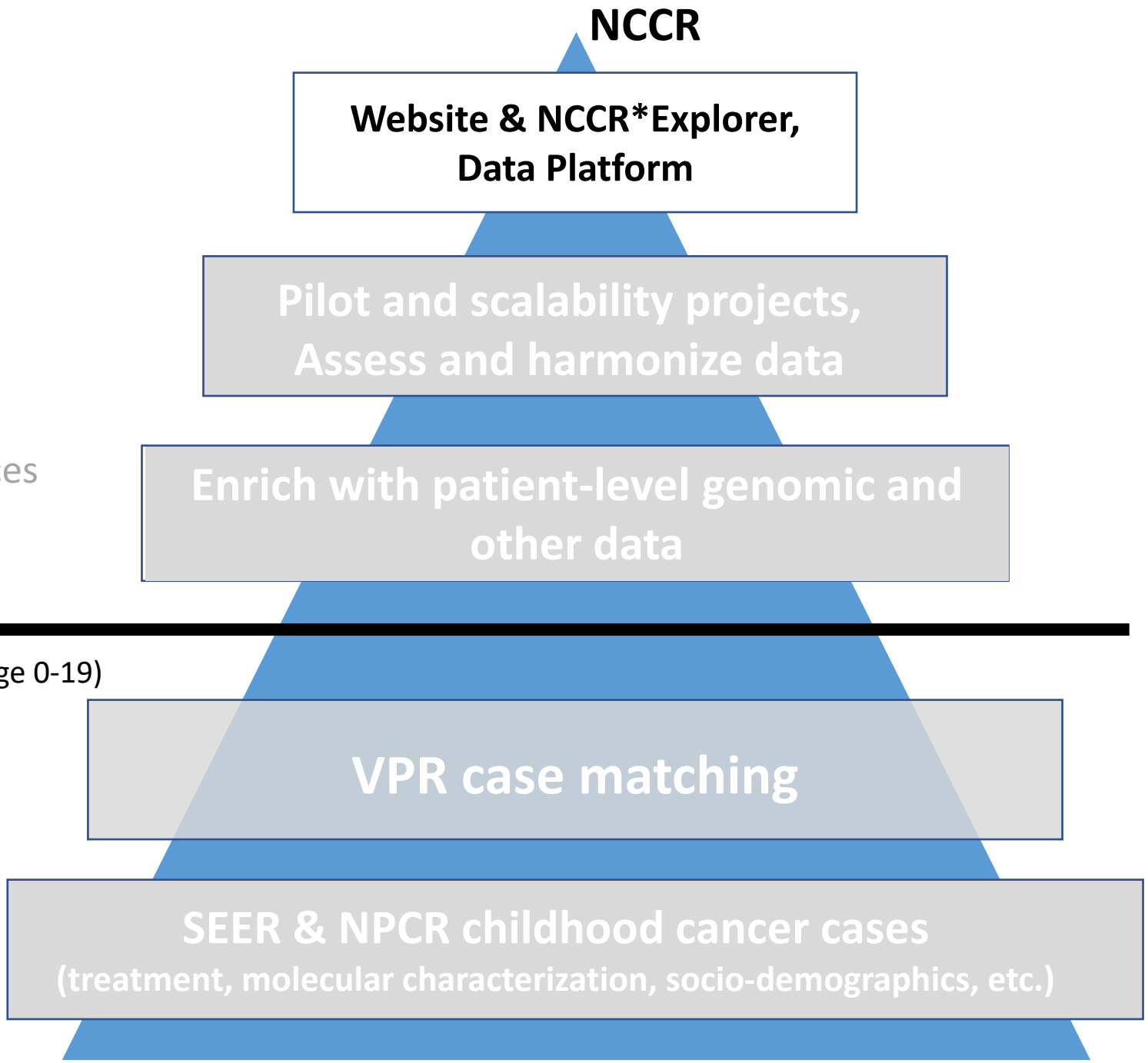

Birth
Cancer Diagnosis
Biomarkers
Outcome
Treatment or Trial
Healthcare visit
Life events
Cancer Diagnosis
1995, age 5
1995-1996
2015, age 20
2021, age 26
LexisNexis, COG, Birth Records

How do we share data?

- **Communicate progress!**

- Pilots like Birth Records, Whole Slide Imaging, Medicaid
- Other efforts to improve data quality and resources with CDC, HemOnc.org, DOE

- Linkages from detailed, non-registry sources like Cancer Centers, COG, Pediatric Proton/Photon Registry

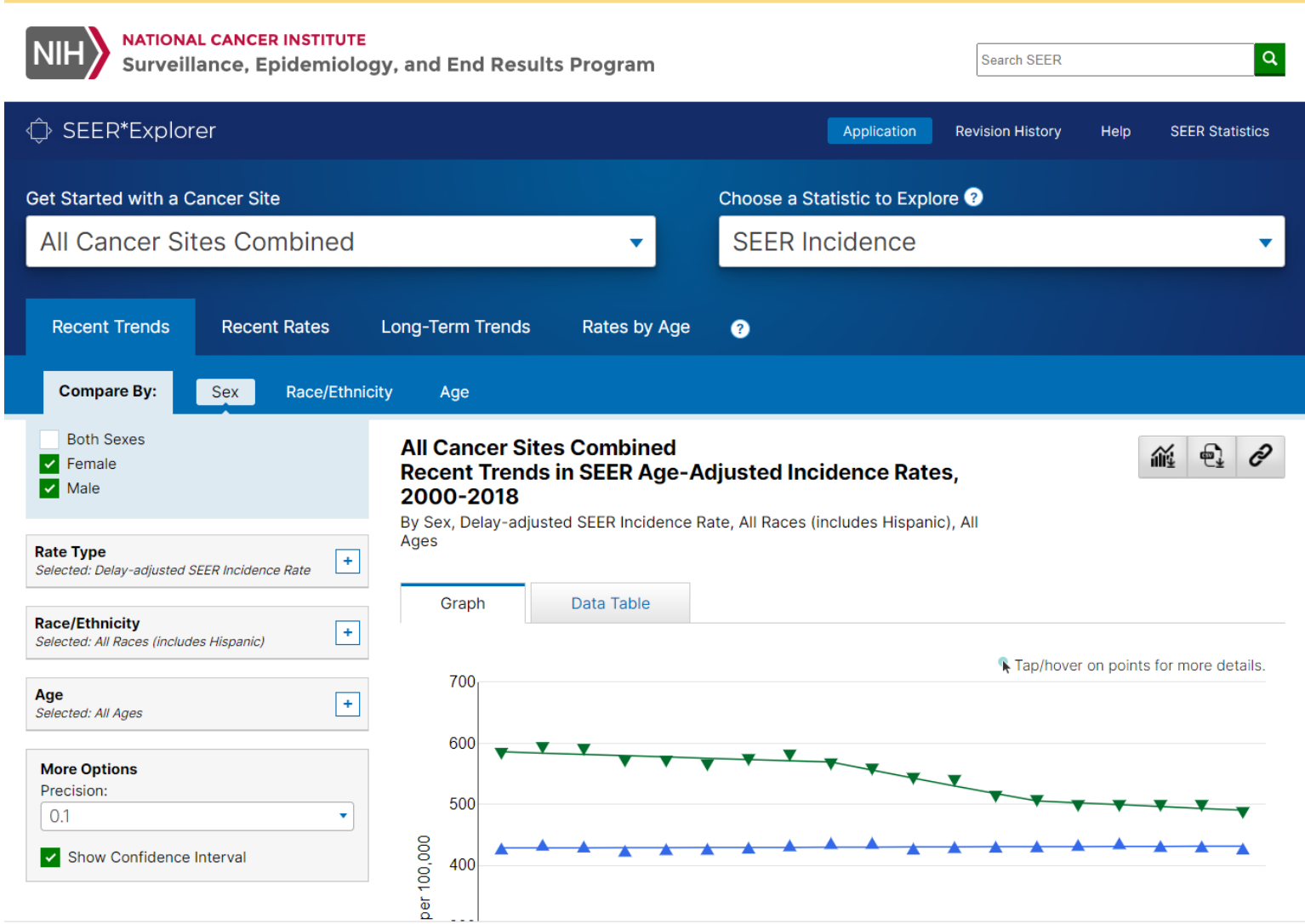


Census of all childhood cancer cases (age 0-19)

- Virtual Pooled Registry NAACCR
  - De-duplication & longitudinal matching
  - 9 states in 2022
  - Enable survivorship studies
- High-quality PII/PHI-based matching of individuals across many data sources
- Rich data from SEER registry abstracts (since 1995; expanding to <40 year-olds)

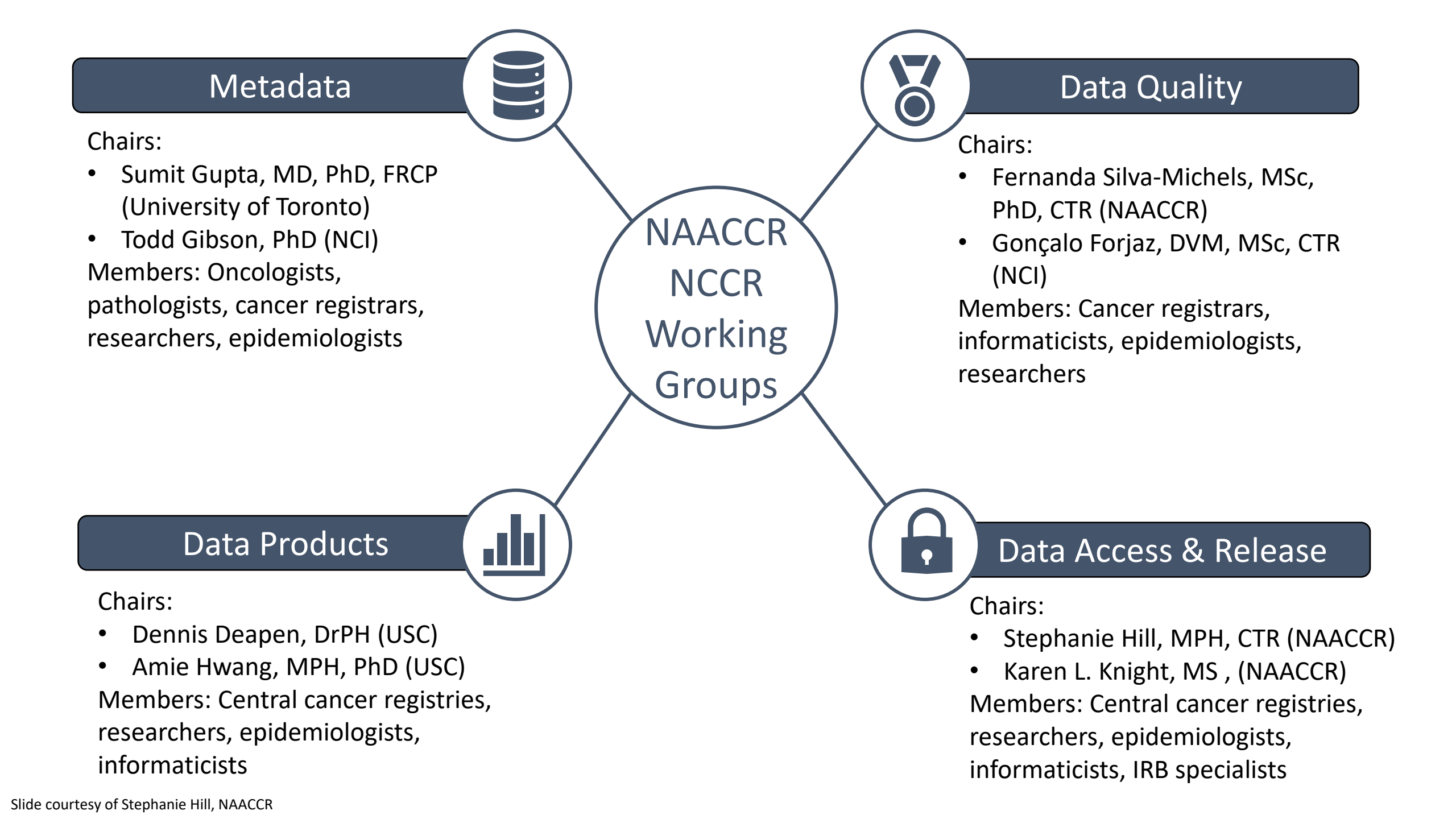
NCCR*Explorer

- Pre-calculated statistics in dynamic tables and plots based on user criteria
- Site-specific age groups based on clinical significance
- Histology-based groupings
- No geographic identifiers to minimize risk of reidentification of small numbers
- Over time will add new variables not collected by registries, e.g., Cancer Center Supplement projects



How do we share data from linkages back to registries?

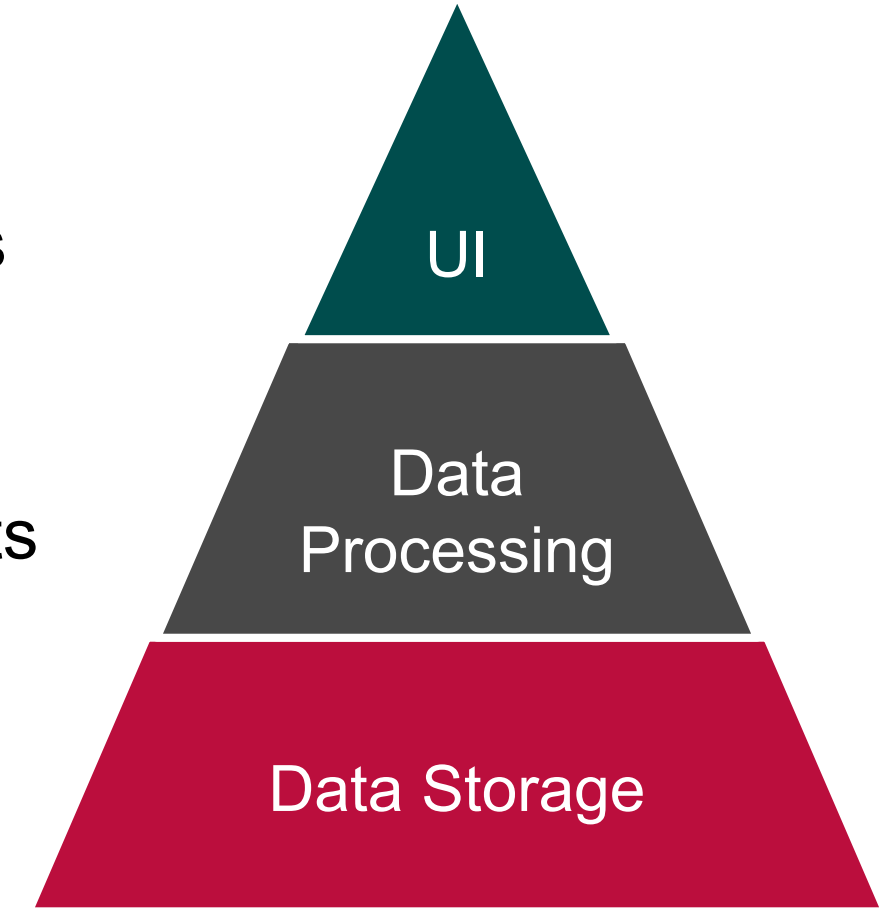
- NCCR-participating registries review and approve linkage protocols
  - Data providers and registries negotiate what data can be shared directly with central cancer registries
- Registries can submit requests to use the controlled access NCCR Data Platform (de-identified)
- Public, aggregate statistics through NCCR*Explorer



Slide courtesy of Stephanie Hill, NAACCR

NCCR Data Platform goal: Enable controlled access to data

- Secure, authorized data sharing
- Integrate with CCDI federated system
- Support searching data using complex queries and building cohorts that meet researcher's criteria
- Built-in governance to request data and cohorts from multiple data providers
- Link data from multiple sources using PII & privacy-preserving record linkages
- Enhance registry data with linked data



Pediatric Cancer Stage based on the Toronto Consensus of 2014

Paediatric cancer stage in population-based cancer registries: the Toronto consensus principles and guidelines

Sumit Gupta, Joanne F Aitken, Ute Bartels, James Brierley, Mae Dolendo, Paola Friedrich, Soad Fuentes-Alabi, Claudia P Garrido, Gemma Gatta, Mary Gospodarowicz, Thomas Gross, Scott C Howard, Elizabeth Molyneux, Florencia Moreno, Jason D Pole, Kathy Pritchard-Jones, Oscar Ramirez, Lynn A G Ries, Carlos Rodriguez-Galindo, Hee Young Shin, Eva Steliarova-Foucher, Lillian Sung, Eddy Supriyadi, Rajaraman Swaminathan, Julie Torode, Tushar Vora, Tezer Kutluk, A Lindsay Frazier

Population-based cancer registries generate estimates of incidence and survival that are essential for cancer surveillance, research, and control strategies. Although data on cancer stage allow meaningful assessments of changes in cancer incidence and outcomes, stage is not recorded by most population-based cancer registries. The main method of staging adult cancers is the TNM classification. The criteria for staging paediatric cancers, however, vary by diagnosis, have evolved over time, and sometimes vary by cooperative trial group. Consistency in the collection of staging data has therefore been challenging for population-based cancer registries. We assembled key experts and stakeholders (oncologists, cancer registrars, epidemiologists) and used a modified Delphi approach to establish principles for paediatric cancer stage collection. In this Review, we make recommendations on which staging systems should be adopted by population-based cancer registries for the major childhood cancers, including adaptations for low-income countries. Wide adoption of these guidelines in registries will ease international comparative incidence and outcome studies.

Lancet Oncol 2016; 17: e163–72

Division of Haematology/Oncology, Hospital for Sick Children, Toronto, ON, Canada (S Gupta PhD, U Bartels MD, L Sung PhD); **Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, ON, Canada** (S Gupta, U Bartels, L Sung); **Cancer Council Queensland, Fortitude Valley, Brisbane, QLD, Australia** (J F Aitken PhD); **Department of Radiation Oncology, Princess Margaret Hospital, Toronto, ON, Canada**

Introduction

cancer stage by population-based cancer registries, and

PMID: 27300676
DOI: 10.1016/S1470-2045(15)00539-2

THE LANCET
Child & Adolescent Health

COMMENT | VOLUME 2, ISSUE 3, P158-159, MARCH 01, 2018

The Toronto Guidelines: a practical means for childhood cancer staging

Nickhill Bhakta • Carlos Rodriguez-Galindo

Published: January 23, 2018 • DOI: https://doi.org/10.1016/S2352-4642(18)30024-5 •

A meaningful comparison of paediatric cancer outcomes over time or by geographical location requires a standardised and systematic collection of data on incident cases, survival

PMID: 30169247
DOI: 10.1016/S2352-4642(18)30024-5

Assessing the feasibility and validity of the Toronto Childhood Cancer Stage Guidelines: a population-based registry study

Joanne F Aitken, Danny R Youlden, Andrew S Moore, Peter D Baade, Leisa J Ward, Vicky J Thursfield, Patricia C Valery, Adèle C Green, Sumit Gupta, A Lindsay Frazier

Summary

Background Cancer stage at diagnosis is crucial for assessing global efforts to increase awareness of childhood cancer and improve outcomes. However, consistent information on childhood cancer stage is absent from population cancer

Childhood Cancer Stage Guidelines, compiled through an international consensus
e a standard framework for collection of information on stage at diagnosis of
assess the feasibility of implementing the Toronto Guidelines within a national

ed registry study using data from the Australian Childhood Cancer Registry and
d 0–14 years diagnosed between Jan 1, 2006, and Dec 31, 2010 with one of
Toronto Guidelines (acute lymphoblastic leukaemia, acute myeloid leukaemia,
gkin lymphoma, neuroblastoma, Wilms' tumour, rhabdomyosarcoma, non-
sarcoma, osteosarcoma, Ewing's sarcoma, retinoblastoma, hepatoblastoma,

Lancet Child Adolesc Health 2018; 2: 173–79

Published Online January 23, 2018 http://dx.doi.org/10.1016/S2352-4642(18)30023-3

See Comment page 158

Cancer Council Queensland, Brisbane, QLD, Australia (Prof J F Aitken PhD, D R Youlden BSc, Prof P D Baade PhD, L J Ward); **Institute for Resilient Regions, University of Southern**

PMID: 30169253

DOI: 10.1016/S2352-4642(18)30023-3

Belgian Cancer Registry

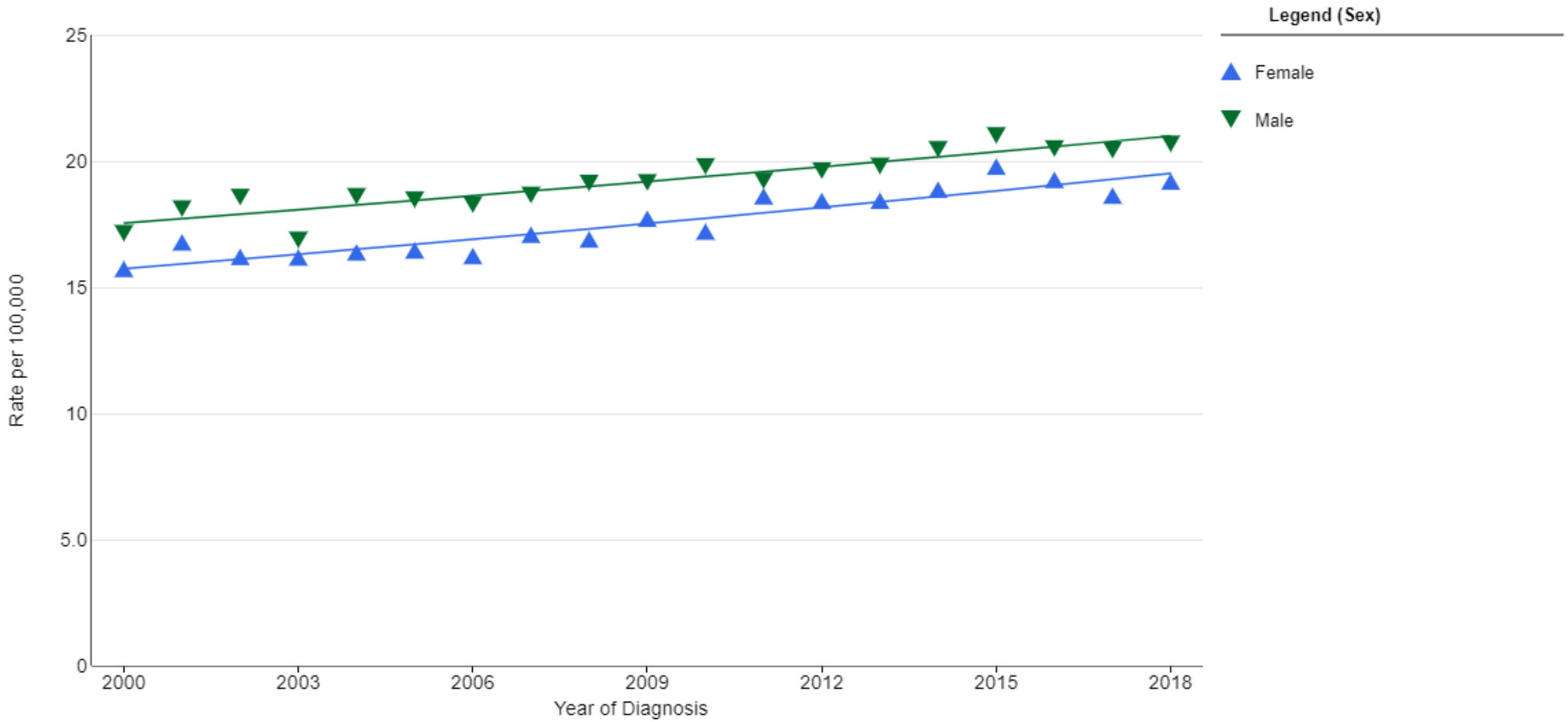
Paediatric cancer stage guidelines for the Belgian general cancer registration, incidence year 2020

The Belgian Cancer Registry recommends to include the Tiered staging system described in the chapter "Paediatric Tumours" of the TNM booklet, 8th edition[1] into their general cancer registration. This staging system is based on the Toronto Paediatric Cancer Stage Guidelines, which were determined on the consensus meeting held in 2014[2] and actualised in the consensus meeting in October 2019 in Lyon[3]. This document indicates and explains all the guidelines used for this registration.

https://kankerregister.org/media/docs/downloads/zorgprogramma/PaediatriccancerstageguidelinesfortheBelgiangeneralcancerregistrationincidenceyear2020.pdf

Looking ahead

All Cancer Sites Combined
Recent Trends in SEER Age-Adjusted Incidence Rates, 2000-2018
By Sex, Delay-adjusted SEER Incidence Rate, All Races (includes Hispanic), Ages < 20



Created by https://seer.cancer.gov/explorer on Fri May 21 2021.
SEER 21 areas [http://seer.cancer.gov/registries/terms.html] (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
The Annual Percent Change (APC) and Average Annual Percent Change (AAPC) estimates were calculated from the underlying rates using the Joinpoint Trend Analysis Software [http://surveillance.cancer.gov/joinpoint], Version 4.9, March 2021, National Cancer Institute.
The APC's/AAPC's direction is "rising" when the entire 95% confidence interval (C.I.) is above 0, "falling" when the entire 95% C.I. is lower than 0, otherwise, the trend is considered stable.
Rates for American Indians/Alaska Natives only include cases that are in a Purchased/Referred Care Delivery Area (PRCDA). See SEER Race Recode Documentation for American Indian/Alaskan Native Statistics [http://seer.cancer.gov/seerstat/variables/seer/race_ethnicity/#ai-an].
Hispanics and Non-Hispanics are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on the NAACCR Hispanic Latino Identification Algorithm (NHIA) and exclude cases from the Alaska Native Registry. See SEER Race Recode Documentation for Spanish-Hispanic-Latino Ethnicity [http://seer.cancer.gov/seerstat/variables/seer/race_ethnicity/#hispanic].
See SEER*Explorer Cancer Site Definitions [https://seer.cancer.gov/explorer/cancer-sites.html] for details about the coding used for SEER Incidence data.

What is the outlook for children and adolescents with cancer?

The overall outlook for children and adolescents with cancer has improved greatly over the last half-century. In the mid-1970s, 58% of children (ages 0 to 14 years) and 68% of adolescents (ages 15 to 19 years) diagnosed with cancer survived at least 5 years (1). In 2010–2016, 84.1% of children and 85.3% of adolescents diagnosed with cancer survived at least 5 years (3).

Although survival rates for most childhood cancers have improved in recent decades, the improvement has been especially dramatic for a few cancers, particularly acute lymphoblastic leukemia, which is the most common childhood cancer. Improved treatments introduced beginning in the 1960s and 1970s raised the 5-year survival rate for children diagnosed with acute lymphoblastic leukemia at ages 0 to 14 years from 57% in 1975 to 92% in 2012 (4). The 5-year survival rate for children diagnosed with non-Hodgkin lymphoma at ages 0 to 14 years has also increased dramatically, from 43% in 1975 to 91% in 2012 (4).

Because of these survival improvements, in more recent years brain cancer has replaced leukemia as the leading cause of cancer death among children (5).

By contrast, survival rates remain very low for some cancer types, for some age groups, and for some cancers within a site. For example, half of children with diffuse intrinsic pontine glioma (a type of brain tumor) survive less than 1 year from diagnosis (6). Among children with Wilms tumor (a type of kidney cancer), older children (those diagnosed between ages 10 and 16 years) have lower 5-year survival rates than younger children (7). For soft tissue sarcomas, 5-year survival rates in 2008–2014 among children and adolescents ages 0 to 19 years ranged from 65% (rhabdomyosarcoma) to 95% (chondrosarcoma) (8), but children with sarcomas who present with metastatic disease have much lower 5-year survival rates. And the 5-year survival rate for acute lymphoblastic leukemia in 2008–2014 was 91% for children younger than 15 years, compared with 74% for adolescents ages 15 to 19 years (8).

Some evidence suggests that adolescents and young adults with acute lymphoblastic leukemia may have better outcomes if they are treated with pediatric treatment regimens than if they receive adult treatment regimens (9). The improvement in 5-year survival rates for 15- to 19-year-olds with acute lymphoblastic leukemia may reflect greater use of these pediatric treatment regimens.

https://www.cancer.gov/types/childhood-cancers/child-adolescent-cancers-fact-sheet#:~:text=In%20the%20mid%2D1970s%2C%2058,least%205%20years%20(3)

What does the NCCR mean for FCDS?

NCI and researchers use your work to evaluate treatment, outcomes, and long-term effects of childhood cancer

Linkages are available to Florida

What you have done since 1995 is contributing today and in the future

Florida is helping to grow rich data resources for rare cancers

NATIONAL CANCER INSTITUTE

www.cancer.gov

www.cancer.gov/espanol