



# Kaiser Permanente Research Bank

## CELEBRATING 10 YEARS

**450K+**  
participating  
KP members



**400K+**  
health surveys


**130K+**  
Covid-19 surveys



Genomic  
Data **400K**  
participants



Metabolomic  
Data **55K**  
participants



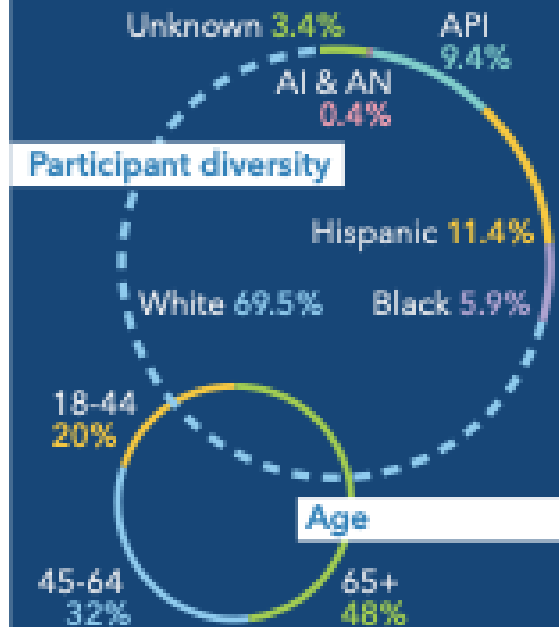
## 185+ Research Studies

**500K+**  
blood samples

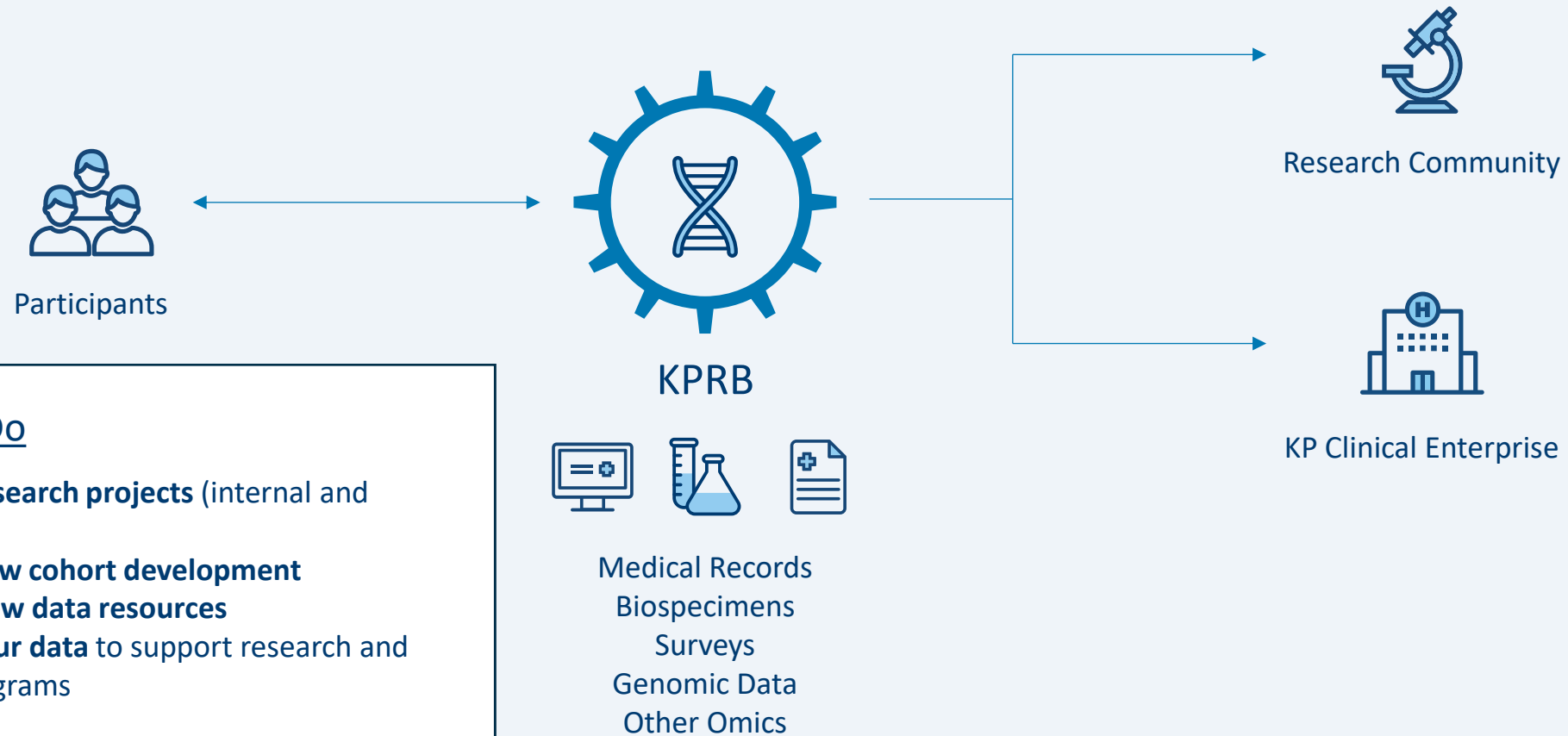
**186K**  
saliva samples



**25K+**  
fecal samples



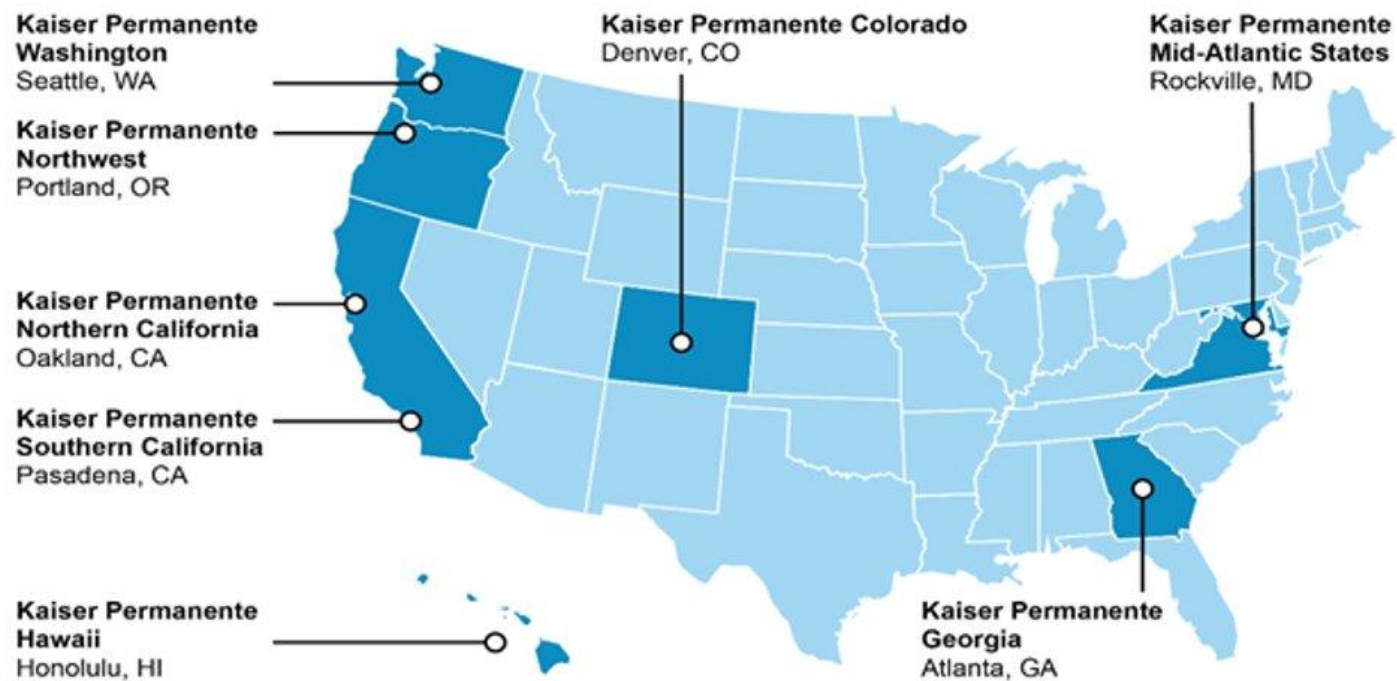
# KPRB Overview



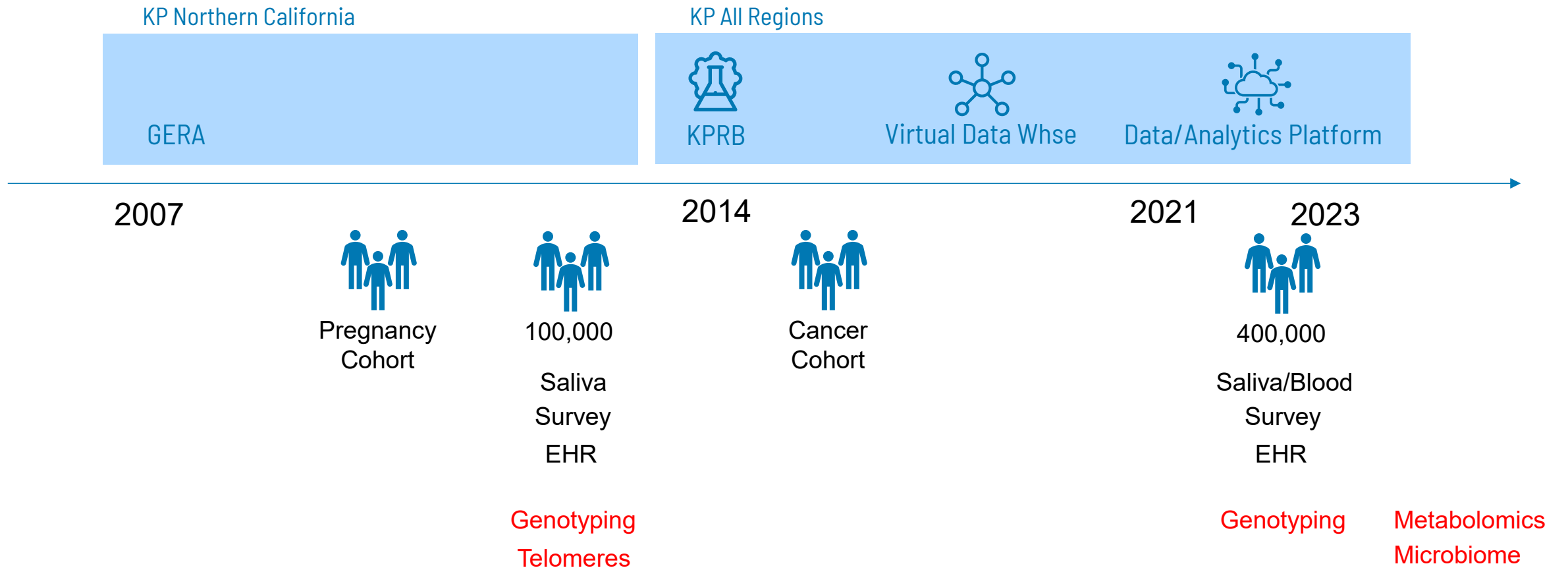
## What We Do

- **Support research projects** (internal and external)
- **Support new cohort development**
- **Develop new data resources**
- **Leverage our data** to support research and clinical programs

# Kaiser Permanente: Organized Around Eight Regions



# KPRB History



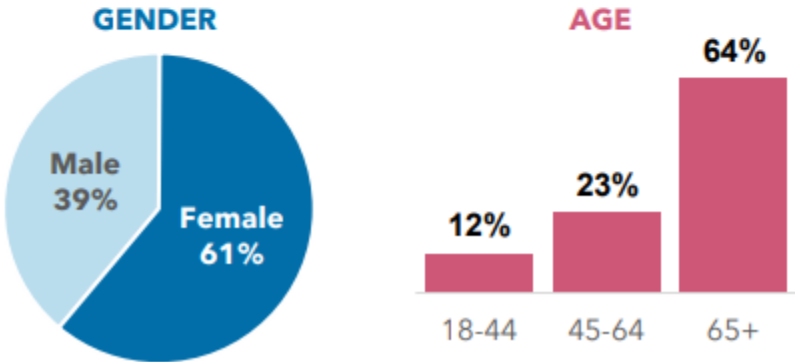
# KPRB Demographics

## POPULATION & DEMOGRAPHICS\*:

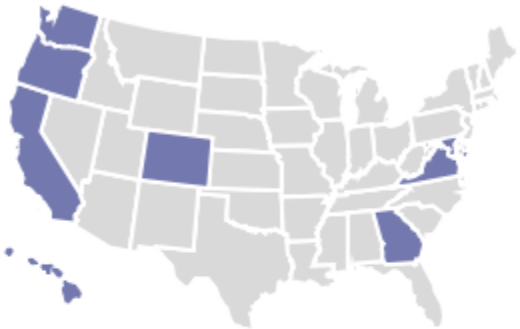
Among the total KPRB population there were special recruitment efforts focused on enrolling pregnant women and members with a cancer diagnosis.

<b>Total Population</b> General + Cancer + Pregnancy Cohorts	<b>430,967</b>
<b>General Cohort</b> Any KP member age 18 or older	316,252
<b>Cancer Cohort</b> KP members with a known history of cancer	89,739
<b>Pregnancy Cohort</b> KP members over age 18 in KP Northern California enrolled during pregnancy	24,976

\*Data is among members who have provided a sample to KPRB (430,967); enrolling through 11/2023



## KAISER PERMANENTE REGIONS



## RACE/ETHNICITY

American Indian & Alaska Native	1,053
Asian American	35,663
Hispanic	46,687
Native Hawaiian/Other Pacific Islander	1,543
Non-Hispanic Black	23,604
Non-Hispanic White	309,670
Other	6,754
Unknown	5,816

# KPRB EHR Data

## Medical Records History and Follow-Up (All participants, 1996-2022)

	25th Pctl	Median	Mean	75th Pctl	Max
Total Years of KP Membership	13.24	20.91	19.35	27.33	28.36
Total Years of Follow-Up	3.65	6.84	7.36	11.73	15.85

## Medical Records History and Follow-Up (Pregnancy Cohort)

	25th Pctl	Median	Mean	75th Pctl	Max
Total Years of KP Membership	8.06	14.47	15.02	22.13	36.07
Total Years of Follow-Up	5.58	8.19	7.56	9.98	14.61

## Medical Records History and Follow-Up (Cancer Cohort)

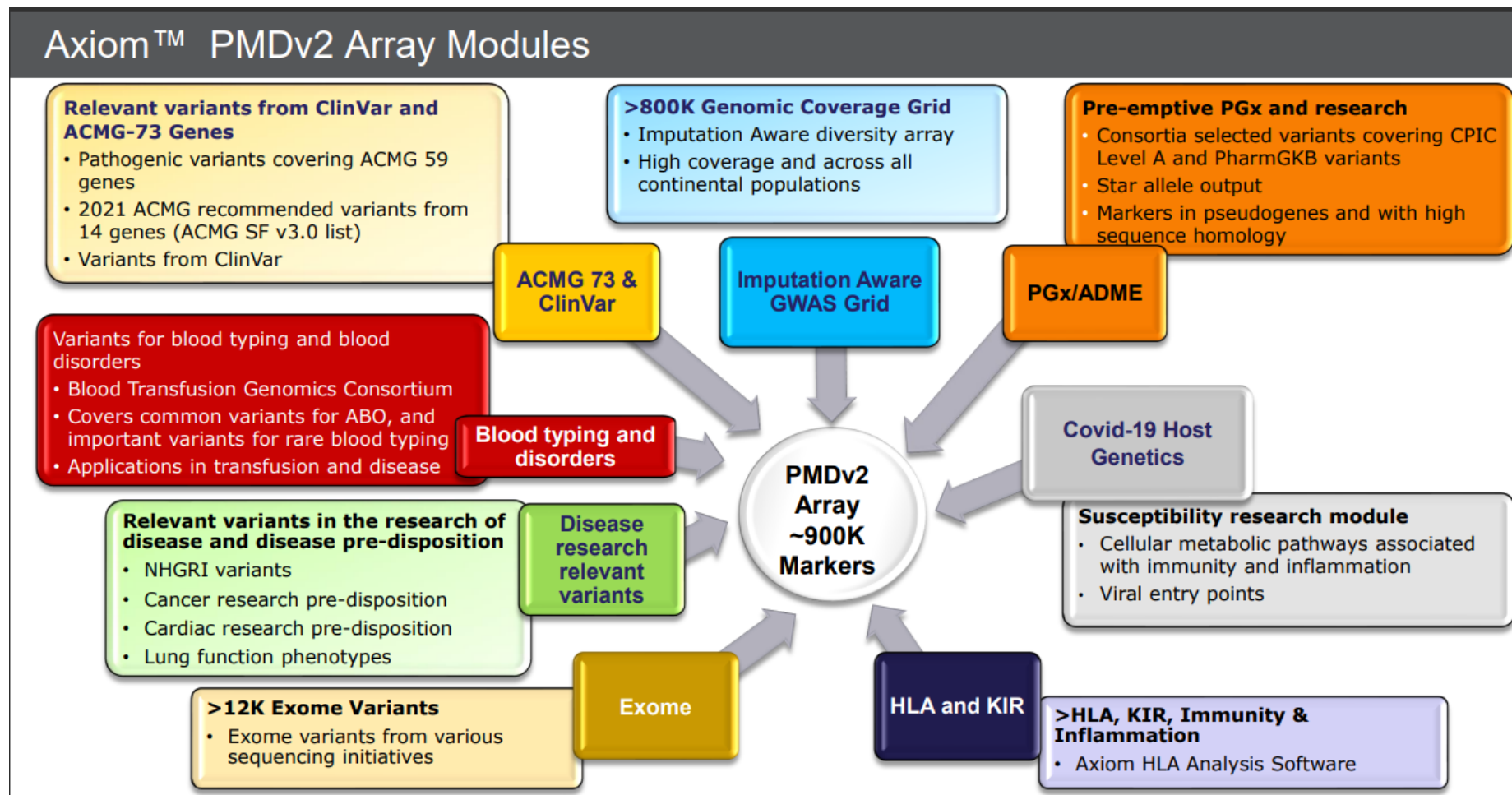
	25th Pctl	Median	Mean	75th Pctl	Max
Total Years of KP Membership	13.61	19.94	20.70	28.87	42.10
Total Years of Follow-Up	1.98	5.60	6.34	11.00	14.77

# KPRB Resources

<div><div>405,232</div><div>KPRB Biomolecular Data</div><div><div>90.23%</div><div>Percentage of KPRB participants with at least one biomolecular data type</div></div><div><div>415K+</div><div>Total number of assays</div></div><div><a href="#">View Biomolecular Data Types</a></div></div>	<div><div>433,444</div><div>KPRB Biosamples</div><div><div>96.51%</div><div>Percentage of KPRB participants with at least one biospecimen</div></div><div><div>737K+</div><div>Total number of biosamples</div></div><div><a href="#">View Biosample Types</a></div></div>	<div><div>382,305</div><div>KPRB Surveys</div><div><div>85%</div><div>Percentage of KPRB participants with at least one intake survey</div></div><div><div>432K+</div><div>Total number of intake surveys</div></div><div><a href="#">View Survey Types</a></div></div>
<div><div>449,056</div><div>At least one address matched to a U.S. Census Geocode</div><div><div>99.99%</div><div>Percentage of KPRB Cohort with at least one data point</div></div><div><div>2M+</div><div>Total number of data points</div></div></div>	<div><div>448,957</div><div>Clinical Encounters</div><div><div>99.96%</div><div>Percentage of KPRB Cohort with at least one data point</div></div><div><div>171M+</div><div>Total number of data points</div></div></div>	<div><div>389,688</div><div>Clinically-Administered Medications</div><div><div>86.77%</div><div>Percentage of KPRB Cohort with at least one data point</div></div><div><div>60M+</div><div>Total number of data points</div></div></div>
<div><div>448,925</div><div>Diagnoses</div><div><div>99.96%</div><div>Percentage of KPRB Cohort with at least one data point</div></div><div><div>333M+</div><div>Total number of data points</div></div><div><a href="#">View Key Diagnoses</a></div></div>	<div><div>447,747</div><div>Lab Results</div><div><div>99.69%</div><div>Percentage of KPRB Cohort with at least one data point</div></div><div><div>266M+</div><div>Total number of data points</div></div><div><a href="#">View Key Laboratory Results</a></div></div>	<div><div>447,545</div><div>Outpatient Medications</div><div><div>99.65%</div><div>Percentage of KPRB Cohort with at least one data point</div></div><div><div>132M+</div><div>Total number of data points</div></div></div>

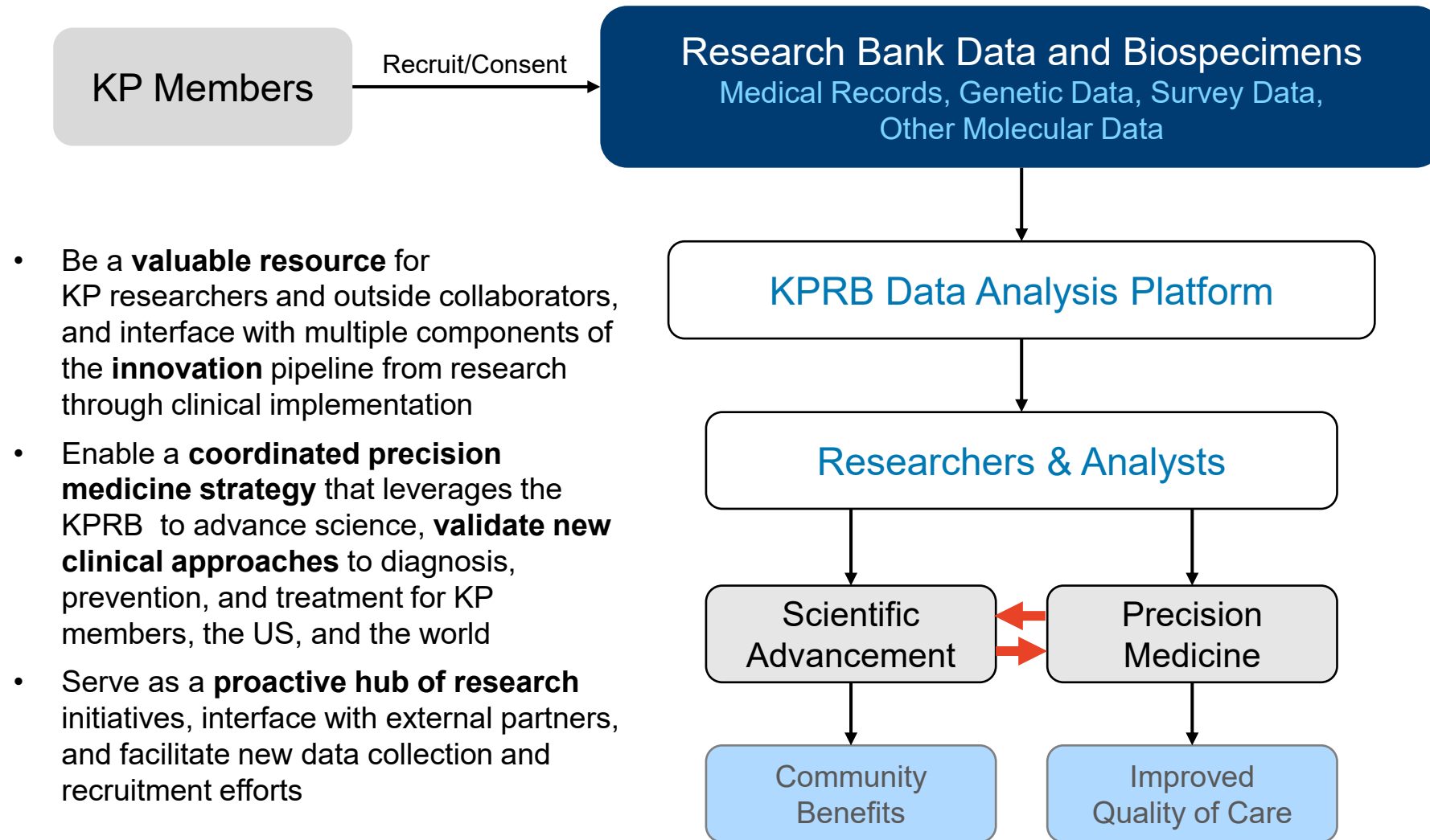


# KPRB Genomic Data

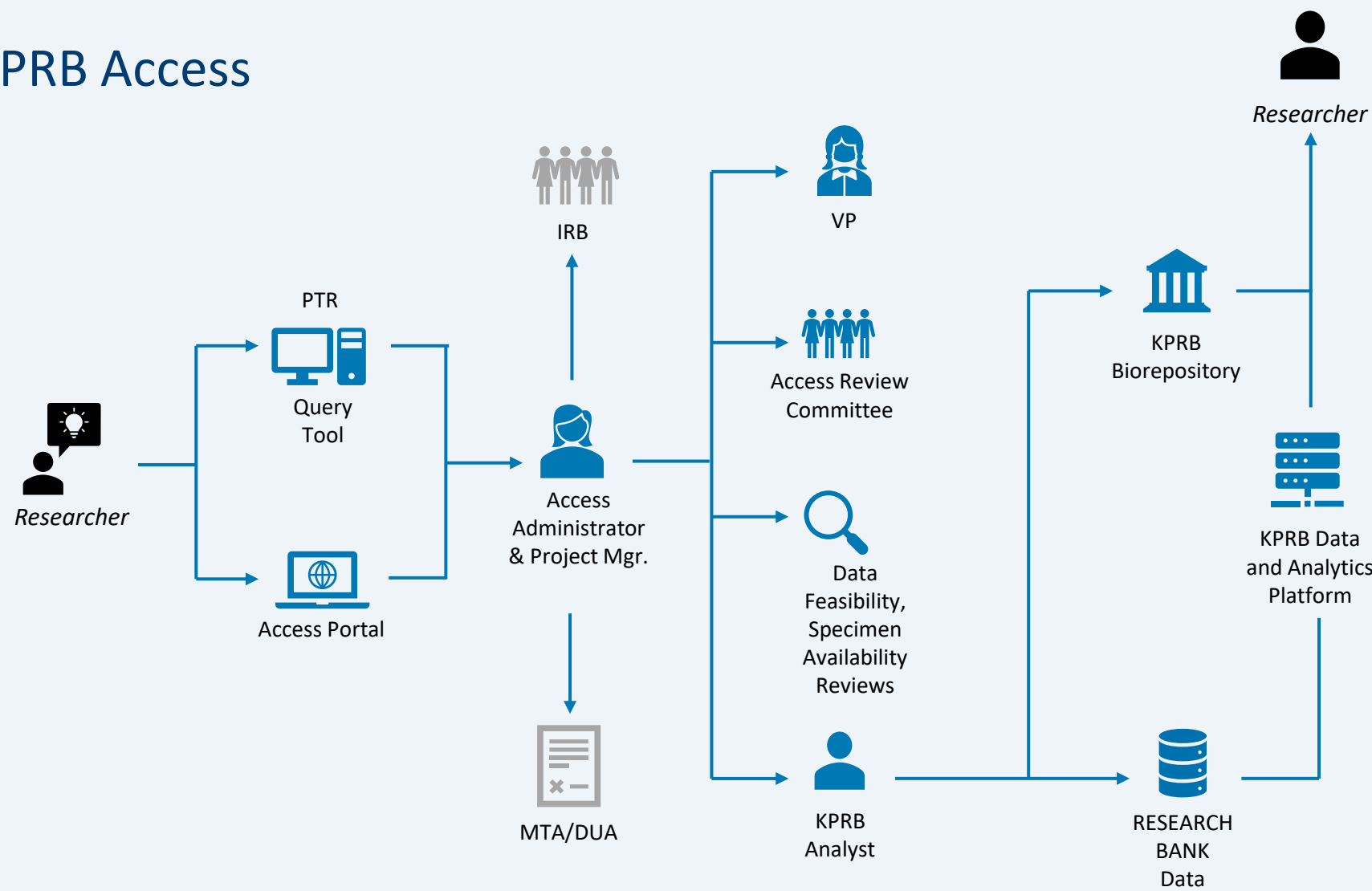


**ThermoFisher**  
SCIENTIFIC

# KP Research Bank Strategy and Mission



# KPRB Access



## KPRB Recent and Current Projects

- Genotyping of 400,000 participants on modern array with clinically relevant content
  - Imputation complete (TopMED)
  - Genetic ancestry, PCs, local ancestry estimates
  - PGS Calc & PGS Catalog
- Partnership with Genomics, Inc (UK) to develop polygenic risk models for 8-10 diseases
- NMR-based metabolomics on 55K participants with longest follow-up time
- FIT-kit based fecal samples from colorectal cancer screening from microbiome work (40k by 2025)
- Longitudinal blood sample collection from 5+ year participants (60k by 2025)
- Return of results survey and pilot projects

# KPRB Partnerships

## **Access Initiative**

- Exploring partnerships with key institutions that would give their researchers easier access
  - HCSRN partner institutions use a common data model (VDW)
  - Opportunity for easier data integration and validation
  - Partnership would include common data use and research agreements to speed application process
  - Partner institutions could reduce the need for KP co-Investigator
  - Other process improvements
    - Access to Trusted Research Environment
    - Shared best practices, disease/outcomes definitions

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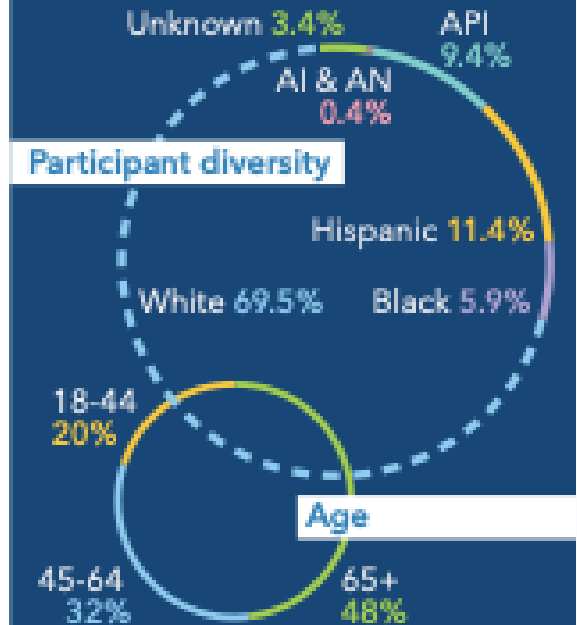
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# Questions