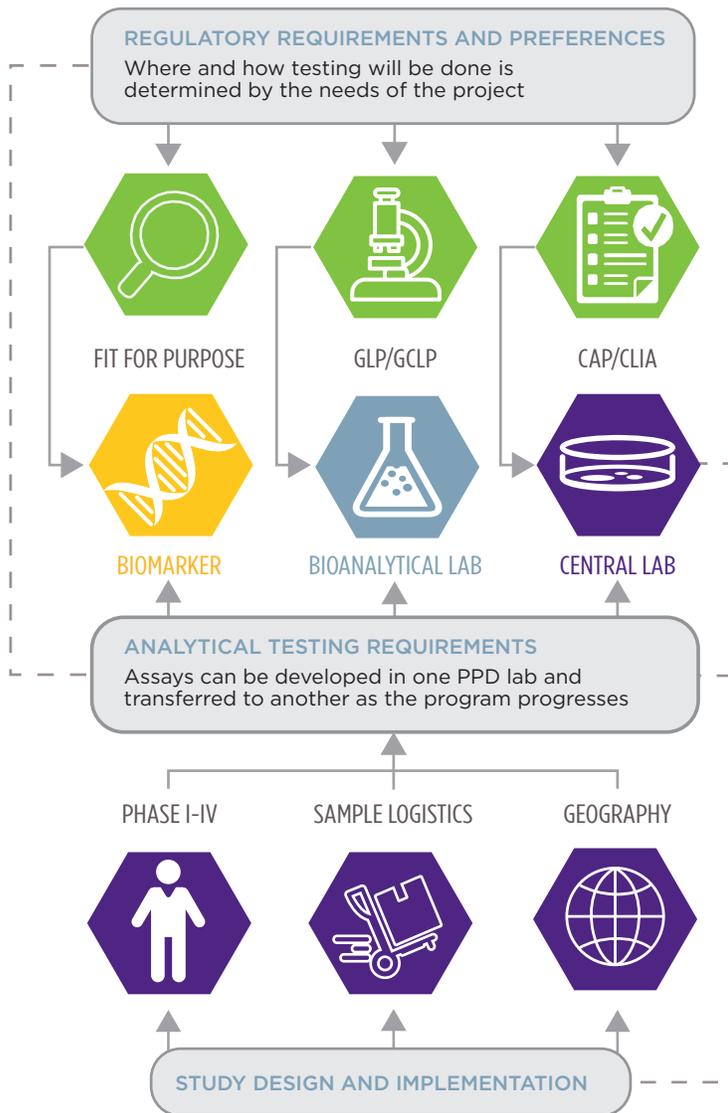




Confirming the usefulness of biomarkers of interest and measuring the biomarkers in patient samples



BIOMARKER LAB SERVICES

FIVE TECHNOLOGIES

- + Flow cytometry/cell-based assays
- + Immunoassays
- + LC/MS
- + Molecular genomics
- + Immunohistochemistry

ANALYTICAL SUPPORT

- + Targeted biomarker analytical technology selection
- + Identify appropriate regulatory compliance based upon context of use
- + Identify assay performance characteristics
- + De novo assay development or method transfer
- + Assay validation or qualification
- + Comprehensive studywide data reporting
- + Dedicated program management
- + Sample procurement and management

TYPES OF STUDIES

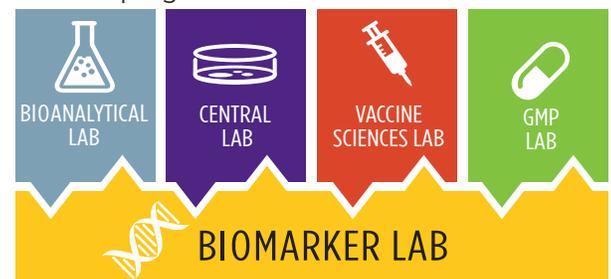
- + Preclinical and clinical studies (Phase I-IV)
- + Trial/treatment screening and/or diagnostic testing use
- + Companion diagnostic development studies
- + Post market surveillance studies

THE FACTS

PPD Laboratories **integrates biomarker development** across multiple regulatory environments

Our biomarker lab brings together **ALL FIVE ASSAY TECHNOLOGIES** to biomarker development

PPD Laboratories has the **depth of expertise** and **MORE THAN 20 YEARS** of experience to help clients define the best regulatory strategy for their program



HALLMARKS OF PPD LABORATORIES

- + In addition to a standalone biomarker lab, biomarker development services are also integrated into both our bioanalytical lab and our central lab
- + PPD takes an integrated approach to biomarkers and can support clients through the various regulatory environments
- + PPD has expertise across all five technologies typically applied to biomarker development
- + Our biomarker working group brings regulatory and therapeutic area expertise from PPD's CRO to biomarker development programs