Using Inclusion/Exclusion Criteria to Retrieve BioSpecimens
eSphere: Integrating Clinical, Research, Regulatory, Administrative, BioSpecimen, Case Coordination
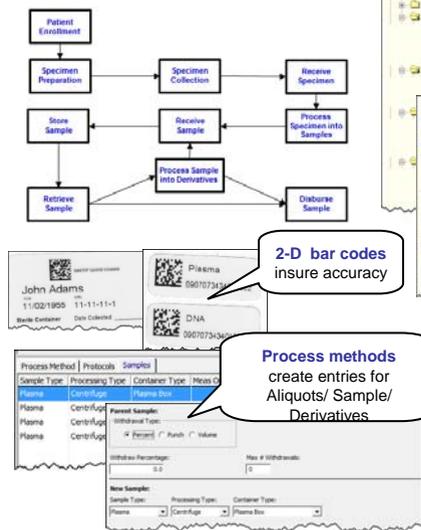
Increase Quality and Quantity of Specimens/Samples

- *Follow best practices*

System generated
unique ID / bar code

2-D bar codes
insure accuracy

Process methods
create entries for
Aliquots/ Sample/
Derivatives

Specimen collection
Scan bar code to verify
subject/specimen

Receive Specimen in Lab
Scan bar code to verify
subject/specimen

Annotate Specimen

- *Merge subject data and specimen data*
  - ✓ History
  - ✓ Physical exam
  - ✓ Questionnaires
  - ✓ Events
  - ✓ Lab results / assays
  - ✓ Diagnosis
  - ✓ Problem lists

User defined normal values
identify problems

Produce Wish Lists

- *Filter Data / Use Rules Engine*
  - ✓ History
  - ✓ Physical exam
  - ✓ Questionnaires
  - ✓ Events
  - ✓ Lab results / assays
  - ✓ Diagnosis
  - ✓ Problem lists

- *Inclusion / Exclusion criteria*

Wizards
guide creation of wish list

Investigator
defined criteria

Leading Edge Technology

- *Interfaces*
  - ✓ HL7 interfaces
    - Demographics
    - Allergies
    - Clinical Data
  - ✓ CRIS interfaces
  - ✓ Lab results
  - ✓ Biomedical device data
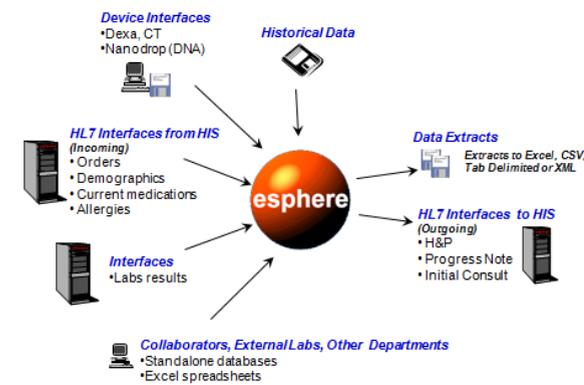- *System Platform*
  - ✓ Oracle database
  - ✓ Citrix server / Windows or Mac
  - ✓ Web-enabled
- *Architecture*
  - ✓ Object oriented technology
  - ✓ Three tier design
  - ✓ Data warehouse
- *Migrate manual / inefficient processes to best practices*
  - ✓ From manual / spreadsheet logs to computerized inventory
  - ✓ From manual written labels to bar codes
  - ✓ From manual searches that take days /weeks to searches based on rules that takes minutes
  - ✓ From browsing freezers to browsing in computer
  - ✓ From single user system to multi-user system
  - ✓ From error prone process to fail safe verifiable process – computerized audits
  - ✓ From poorly documented specimens to standardized annotation

Device Interfaces
- Dexa, CT
- Nanodrop (DNA)

Historical Data

HL7 Interfaces from HIS (Incoming)
- Orders
- Demographics
- Current medications
- Allergies

Interfaces
- Labs results

Data Extracts
Extracts to Excel, CSV, Tab Delimited or XML

HL7 Interfaces to HIS (Outgoing)
- H&P
- Progress Note
- Initial Consult

Collaborators, External Labs, Other Departments
- Standalone databases
- Excel spreadsheets

esphere

Clinical Research
Data Management