National Cancer Institute

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Biospecimen Resources for Population Scientists for Cancer Research

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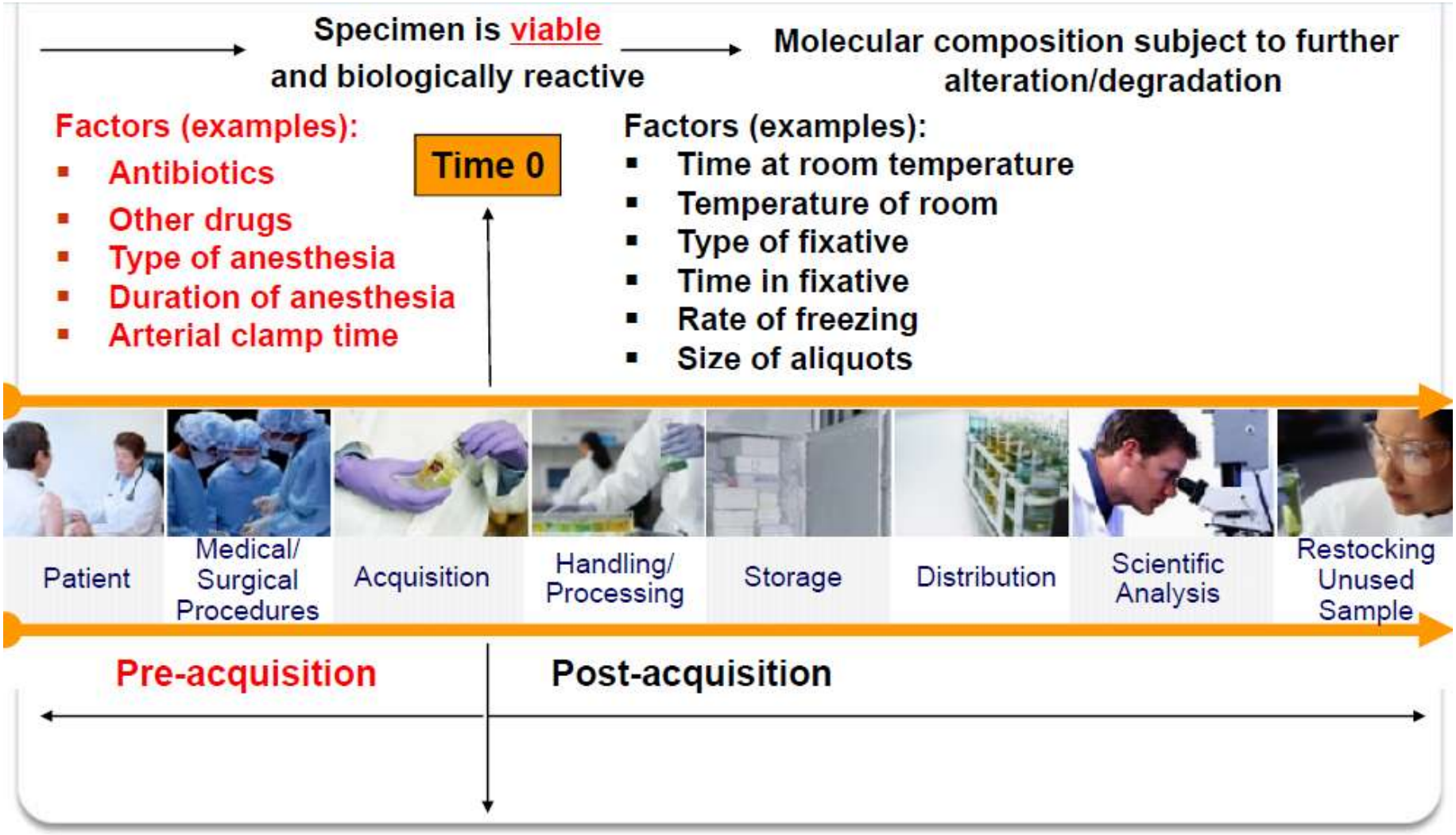
Overview of Presentation

- Background
- Resources for Planning Studies
- Sources of Biospecimens
- Further Information
- Discussion

Why Biospecimens?

- Understand disease etiology
- Identify susceptible subgroups
- Select most appropriate treatments
- Develop effective screening methodologies

Pre-analytical Factors Can Affect Biomarkers



NCI Office of Biorepositories and Biospecimen Research (OBBR)

http://biospecimens.cancer.gov

- **Standards**
  - The *NCI's Best Practices for Biospecimen Resources*
- **Science**
  - The Biospecimen Research Network (BRN)
  - The Innovative Molecular Assessment Technologies (IMAT)
- **Specimens**
  - The Cancer Human Biobank (caHUB)

NCI Best Practices for Biospecimen Resources

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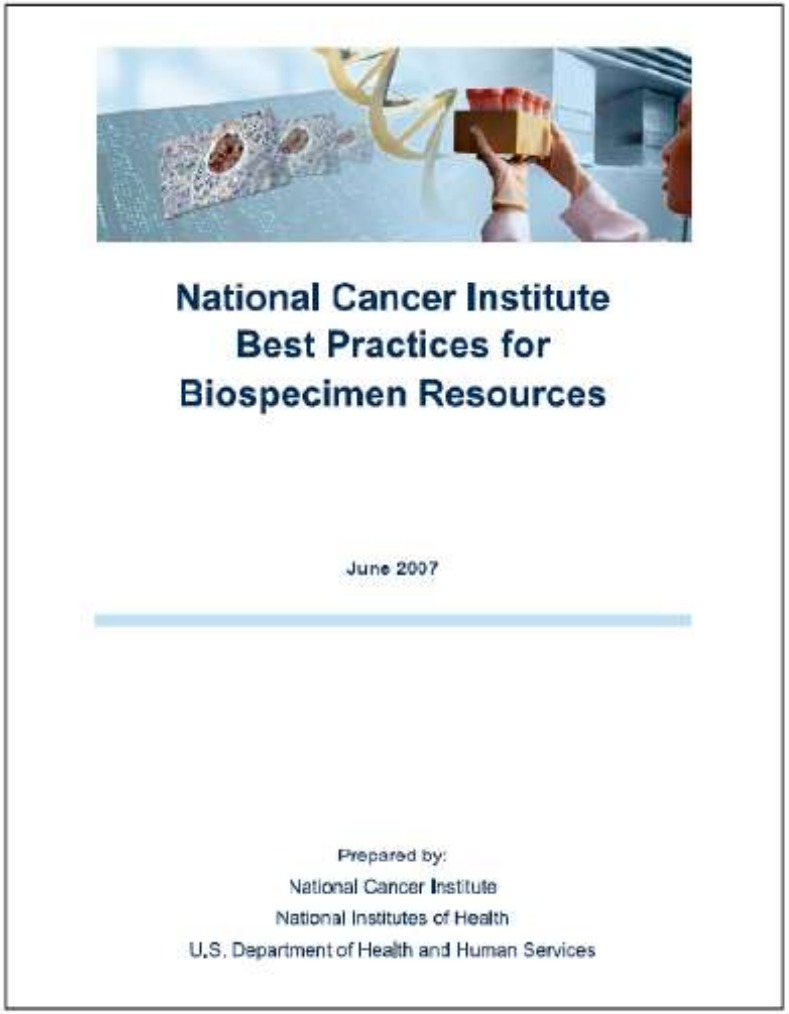


Objectives:

- **Unify policies and procedures for NCI-supported biospecimen resources for cancer research**
- **Provide a baseline for operating standards on which to build as the state of the science evolves**
- **Updated in 2010 – open for public comment on US Federal Register**

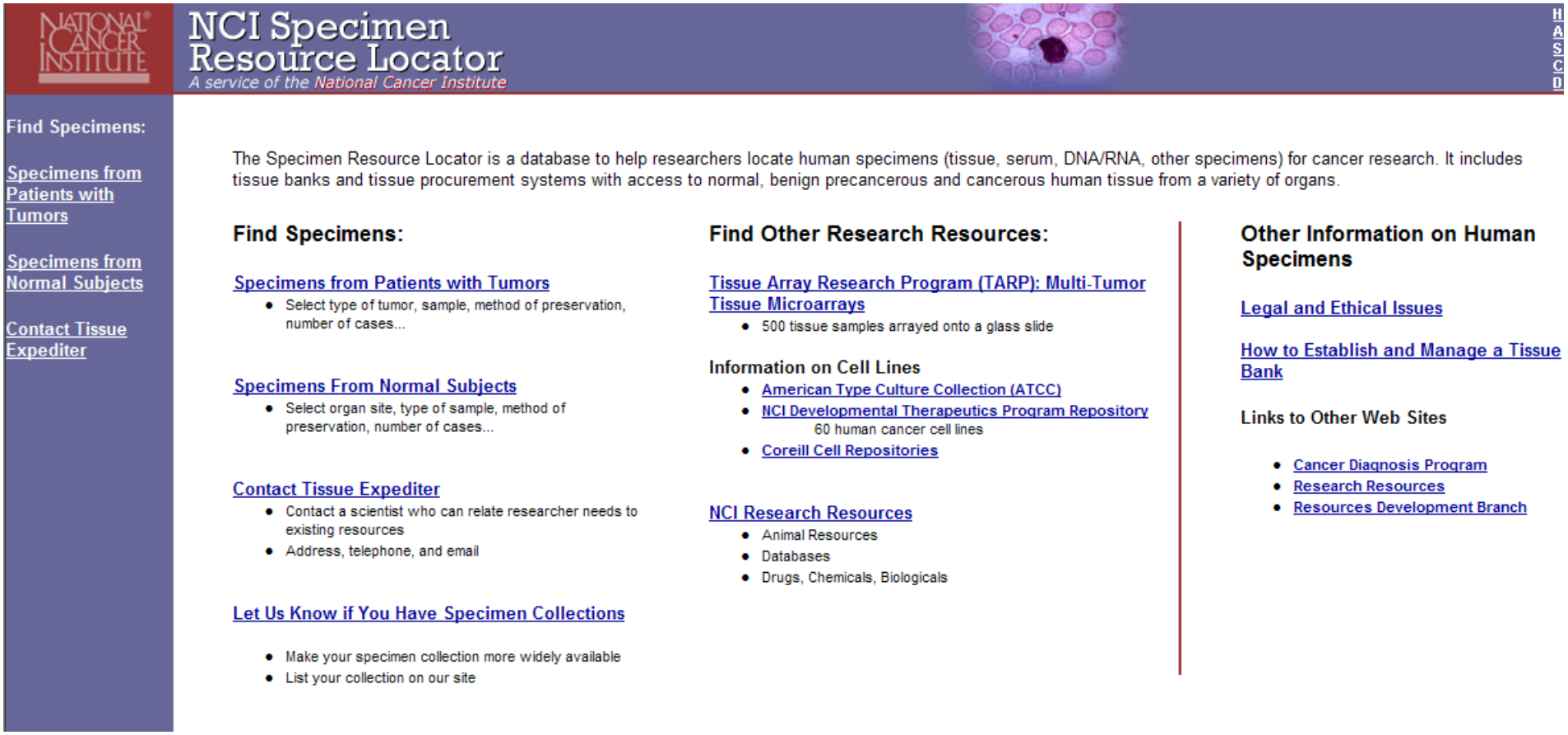
http://biospecimens.cancer.gov

Biospecimen Research Database

Specimen Resource Locator

Specimen Resource Locator

http://pluto3.nci.nih.gov/tissue/default.htm



NCI Supported Studies

- Agricultural Health Study (AHS)
- AIDS and Cancer Specimen Resource (ACSR)
- Alpha-Tocopherol, Beta-Carotene Cancer Prevention Study (ATBC)
- The Breast Cancer Intergroup of North America
- Breast and Colon Cancer Family Registries (CFRs)
- Carotene and Retinol Efficacy Trial (CARET)
- Cooperative Breast Cancer Tissue Resource (CBCTR)
- Cooperative Human Tissue Network (CHTN)
- Health Professionals Follow-Up Study (HPFS)
- The Nurses' Health Study (NHS)
- Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial
- Southern Community Cohort Study (SCCS)
- Southwest Oncology Group (SWOG) – Prostate Cancer Prevention
- SEER Residual Tissue Repository (RTR) Program

http://epi.grants.cancer.gov/biospecimens.html

DCCPS Breast and Colon Cancer Family Registries

http://epi.grants.cancer.gov/CFR/about_breast.html
http://epi.grants.cancer.gov/CFR/about_colon.html

Sample Type	B-CFR # of Individuals	C-CFR # of Individuals
Genomic DNA	22,952	31,413
Tissue sections on slides	5,318	8,722
Slow-frozen lymphocyte cells	11,704	22,928
Plasma	16,119	24,694
LCL (lymphoblast cell line)	8,556	4,718

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SEER RTR (http://seer.cancer.gov/biospecimen/) Estimated Number of Specimens Available*

Cancer Site	Total 1980-2007
All Sites Combined	141,241
Breast	22,424
Prostate	18,426
Lung and Bronchus	18,060
Colon and Rectum	18,043
Urinary Bladder	5,829
Non-Hodgkin Lymphoma	5,704
Corpus and Uterus, NOS	4,596
Stomach	4,144
Oral Cavity and Pharynx	3,516
Leukemia	3,297

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Further Information

http://epi.grants.cancer.gov/biospecimens.html

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Discussion