

# Biospecimen Resources for Population Scientists for Cancer Research

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# Overview of Presentation

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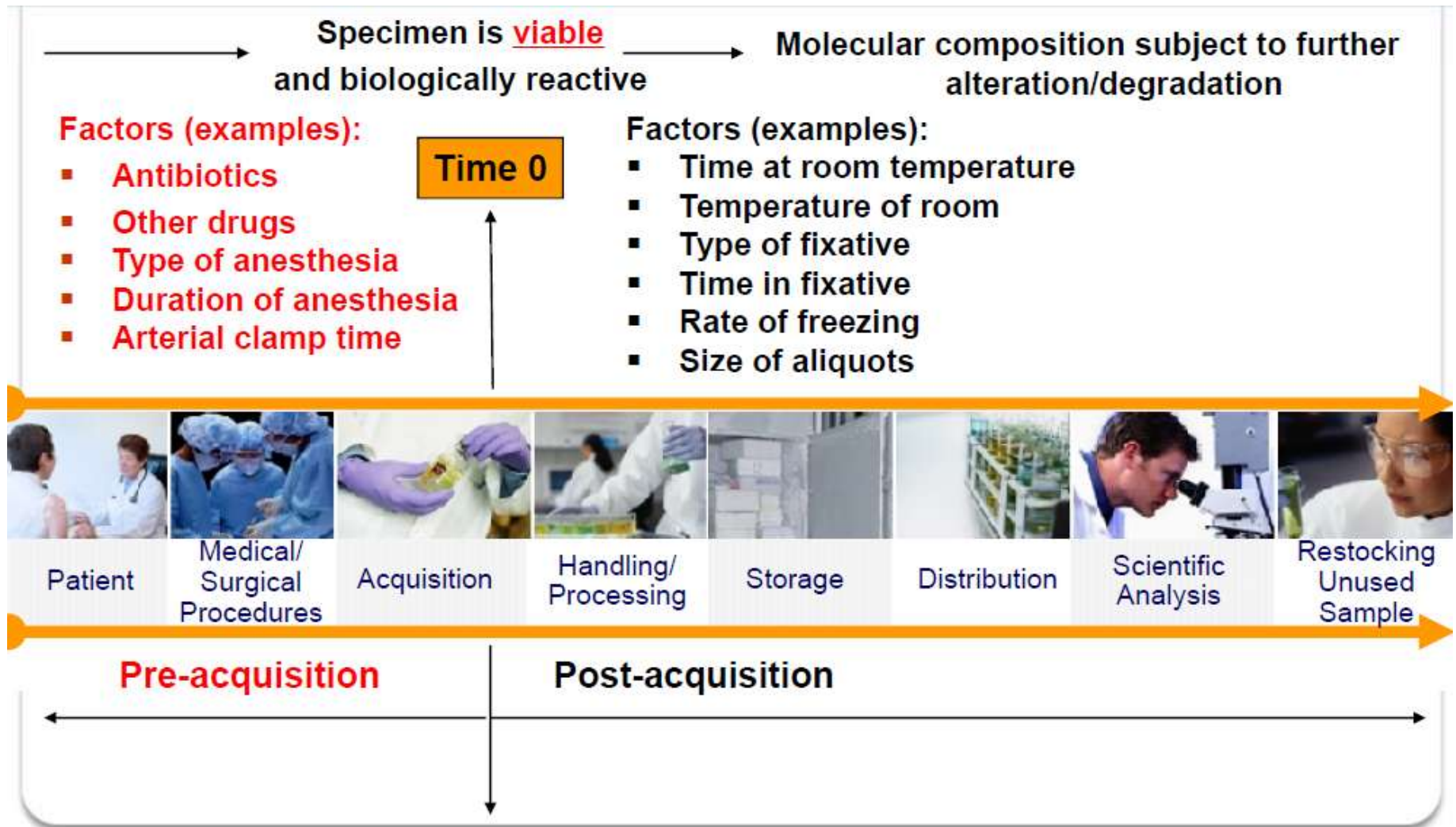
- Background
- Resources for Planning Studies
- Sources of Biospecimens
- Further Information
- Discussion

# Why Biospecimens?

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- 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>

The screenshot shows the OBBR website homepage. At the top left is the OBBR logo and the text "Office of Biorepositories and Biospecimen Research". To the right are buttons for "Launch NCI Best Practices" and "Launch caHUB". Below these is a "Sign Up For Updates" link and a search bar. A navigation menu includes "About OBBR", "About NCI Best Practices", "Biospecimen Research Network", "caHUB", "News and Events", and "Resources". On the left side, there are sections for "PATIENT CORNER" with a "Learn more" link, a "Provocative Questions Project" with a play button icon, and "OBBR Quick Links" with icons for "OBBR Toolbox", "Multi-Media", and "Funding Opps". Below these are links to "caBIG™ Tools", "The Specimen Resource Locator", "Biospecimen Research Database", "Providing Your Tissue for Research", and "NCI Best Practices for Biospecimen Resources". The main content area features "OUR MISSION: The OBBR's mission is to ensure that human specimens available for cancer research are of the highest quality." followed by a paragraph about the OBBR's role in developing a common biorepository infrastructure. Below this is a "Learn more" link. A video player titled "Moving Forward" shows a group of people, with a play button overlay. Below the video player is a caption about hearing from cancer community stakeholders.

**OBBR** Office of Biorepositories and Biospecimen Research

[Launch NCI Best Practices](#) [Launch caHUB](#)

[Sign Up For Updates](#)  [Search](#)

[About OBBR](#) [About NCI Best Practices](#) [Biospecimen Research Network](#) [caHUB](#) [News and Events](#) [Resources](#)

**PATIENT CORNER**  
Learn more

**Provocative Questions Project**

**OBBR Quick Links**

- [OBBR Toolbox](#)
- [Multi-Media](#)
- [Funding Opps](#)

[caBIG™ Tools](#)  
[The Specimen Resource Locator](#)  
[Biospecimen Research Database](#)  
[Providing Your Tissue for Research](#)  
[NCI Best Practices for Biospecimen Resources](#)

**OUR MISSION:** The OBBR's mission is to ensure that human specimens available for cancer research are of the highest quality.

The OBBR is responsible for developing a common biorepository infrastructure that promotes resource sharing and team science, in order to facilitate multi-institutional, high throughput genomic and proteomic studies.

[Learn more](#)

**Moving Forward**

Hear what important cancer community stakeholders from the patient, oncology, research and drug development communities have to say about the critical importance of high-quality biospecimens for cancer research and patient care.

## ■ 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

**OBBR** Office of Biorepositories  
and Biospecimen Research

[Launch NCI Best Practices](#) [Launch caHUB](#)

[Sign Up For Updates](#)  [Search](#)

[About OBBR](#) [About NCI Best Practices](#) [Biospecimen Research Network](#) [caHUB](#) [News and Events](#) [Resources](#)

**PATIENT CORNER**  
[Learn more](#)

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**OBBR Quick Links**  
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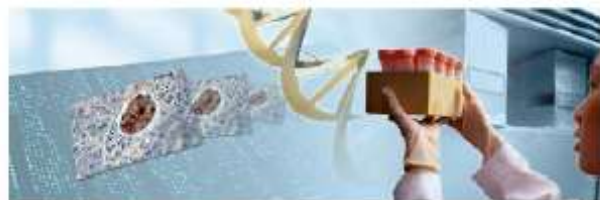
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# NCI Best Practices for Biospecimen Resources

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## National Cancer Institute Best Practices for Biospecimen Resources

June 2007

Prepared by:  
National Cancer Institute  
National Institutes of Health  
U.S. Department of Health and Human Services

### 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



Office of Biorepositories  
and Biospecimen Research

[Launch NCI Best Practices](#) [Launch caHUB](#)

[Sign Up For Updates](#)  [Search](#)

[About OBRR](#) [About NCI Best Practices](#) [Biospecimen Research Network](#) [caHUB](#) [News and Events](#) [Resources](#)



**PATIENT CORNER**  
Learn more



**Provocative Questions Project**

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[Learn more](#)

**OBRR Quick Links**



**OBRR Toolbox**



**Multi-Media**



**Funding Opps**

- [caBIG™ Tools](#)
- [The Specimen Resource Locator](#)
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- [Providing Your Tissue for Research](#)
- [NCI Best Practices for Biospecimen Resources](#)

**Moving Forward**



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# Specimen Resource Locator



Office of Biorepositories  
and Biospecimen Research

[Launch NCI Best Practices](#) 

[Launch caHUB](#) 

[Sign Up For Updates](#)

[Search](#)

[About OBRR](#)

[About NCI Best Practices](#)

[Biospecimen Research Network](#)

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[Resources](#)



**PATIENT CORNER**  
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[Learn more](#) 

**OBRR Quick Links**



**OBRR Toolbox**



**Multi-Media**



**Funding Opps**



[caBIG™ Tools](#)



[The Specimen Resource Locator](#)



[Biospecimen Research Database](#)



[Providing Your Tissue for Research](#)



[NCI Best Practices for Biospecimen Resources](#)

**Moving Forward**



Hear what important cancer community stakeholders from the patient, oncology, research and drug development communities have to say about the critical importance of high-quality biospecimens for cancer research and patient care.

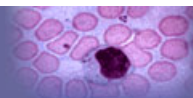
# Specimen Resource Locator

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



## NCI Specimen Resource Locator

A service of the *National Cancer Institute*



H  
A  
S  
C  
D

### Find Specimens:

[Specimens from Patients with Tumors](#)

[Specimens from Normal Subjects](#)

[Contact Tissue Expediter](#)

The Specimen Resource Locator is a database to help researchers locate human specimens (tissue, serum, DNA/RNA, other specimens) for cancer research. It includes tissue banks and tissue procurement systems with access to normal, benign precancerous and cancerous human tissue from a variety of organs.

### Find Specimens:

#### [Specimens from Patients with Tumors](#)

- Select type of tumor, sample, method of preservation, number of cases...

#### [Specimens From Normal Subjects](#)

- Select organ site, type of sample, method of preservation, number of cases...

#### [Contact Tissue Expediter](#)

- Contact a scientist who can relate researcher needs to existing resources
- Address, telephone, and email

#### [Let Us Know if You Have Specimen Collections](#)

- Make your specimen collection more widely available
- List your collection on our site

### Find Other Research Resources:

#### [Tissue Array Research Program \(TARP\): Multi-Tumor Tissue Microarrays](#)

- 500 tissue samples arrayed onto a glass slide

#### Information on Cell Lines

- [American Type Culture Collection \(ATCC\)](#)
- [NCI Developmental Therapeutics Program Repository](#)  
60 human cancer cell lines
- [Coriell Cell Repositories](#)

#### [NCI Research Resources](#)

- Animal Resources
- Databases
- Drugs, Chemicals, Biologicals

### Other Information on Human Specimens

#### [Legal and Ethical Issues](#)

#### [How to Establish and Manage a Tissue Bank](#)

#### Links to Other Web Sites

- [Cancer Diagnosis Program](#)
- [Research Resources](#)
- [Resources Development Branch](#)

# NCI Supported Studies

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- 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

# DCCPS Breast and Colon Cancer Family Registries

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[http://epi.grants.cancer.gov/CFR/about\\_breast.html](http://epi.grants.cancer.gov/CFR/about_breast.html)

[http://epi.grants.cancer.gov/CFR/about\\_colon.html](http://epi.grants.cancer.gov/CFR/about_colon.html)

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

# SEER RTR (<http://seer.cancer.gov/biospecimen/>)

## Estimated Number of Specimens Available\*

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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



# Further Information

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



The screenshot shows the 'Epidemiology and Genetics Research' website under the 'Cancer Control and Population Sciences' banner. The navigation bar includes links for 'About the Program', 'Key Research', 'Funding Opps', 'Our Grantees', 'Workshop Reports', 'Training Opps', and 'More Resources'. On the left sidebar, there are links for 'Cancer Control and Population Sciences Home', 'Epidemiology and Genetics Research Home', and 'More Info and Resources'. A search box with a 'GO' button is located on the right. The main content area is titled 'Biospecimen Resources for Cancer Epidemiologists' and 'Policies and Best Practices for Biospecimen Research'. It features a section for 'Biospecimen Resources at the National Institutes of Health (NIH)' with a bulleted list of links: 'NIH Biospecimens Interest Group', 'National Cancer Institute (NCI) Office of Biorepositories and Biospecimen Research (OBBR)' (which includes sub-links for 'Best Practices for Biospecimen Resources' and 'National Biospecimen Network Blueprint'), and 'NCI Cancer Biomedical Informatics Grid (caBIG)'. Below this is an 'Other Resources' section with links to 'International Society for Biological and Environmental Repositories (ISBER)' (including 'Best Practices for Repositories') and 'Australasian Biospecimen Network (ABN)'. At the bottom, there is a section titled 'Potential Sources of Biospecimens for Investigators'.

**Epidemiology and Genetics Research**  
Cancer Control and Population Sciences

[About the Program](#) [Key Research](#) [Funding Opps](#) [Our Grantees](#) [Workshop Reports](#) [Training Opps](#) [More Resources](#)

[Cancer Control and Population Sciences Home](#)  
[Epidemiology and Genetics Research Home](#)  
[More Info and Resources](#)

This page links to some files in [Portable Document Format \(PDF\)](#).

**Biospecimen Resources for Cancer Epidemiologists**

**Policies and Best Practices for Biospecimen Research**

**Biospecimen Resources at the National Institutes of Health (NIH)**

- [NIH Biospecimens Interest Group](#)
- [National Cancer Institute \(NCI\) Office of Biorepositories and Biospecimen Research \(OBBR\)](#)
  - [Best Practices for Biospecimen Resources](#)
  - [National Biospecimen Network Blueprint](#)
- [NCI Cancer Biomedical Informatics Grid \(caBIG\)](#)

**Other Resources**

- [International Society for Biological and Environmental Repositories](#) (ISBER)
  - [Best Practices for Repositories](#)
- [Australasian Biospecimen Network](#) (ABN)

**Potential Sources of Biospecimens for Investigators**

- Leah Mechanic ([mechanil@mail.nih.gov](mailto:mechanil@mail.nih.gov))
- Sheri Schully ([schullys@mail.nih.gov](mailto:schullys@mail.nih.gov))

# Discussion