



**OBBR** Office of Biorepositories  
and Biospecimen Research

**Cost Recovery Models and Other Economic Issues  
Involved in the Implementation of the *NCI Best Practices***

**Jim Vaught, NCI OBBR**  
**Lisa B. Miranda, University of Pennsylvania**  
Bell Harbor International Conference Center  
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## **Background and Overview**

**Jim Vaught, NCI OBBR**



**NATIONAL  
CANCER  
INSTITUTE**



## Background

### **OBBR is exploring several economic issues based on public comments and other input:**

- Understanding the overall economic value of biospecimen resources that are accessible to the research community
- Supporting the NCI Leadership in considering approaches to control biospecimen resource costs during a period of NIH budget limitations
- Understanding additional costs associated with implementing the *NCI Best Practices*
  - Exploring different cost recovery models for supporting biospecimen resources (Lisa Miranda's presentation)





## Overall Economic Value of Biospecimen Resources\*

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- **Biological Resource Centers (BRCs) amplify the impact of scientific progress by enabling future generations to build on past discoveries**
- **BRCs fulfill several important functions, including:**
  - ***Authenticating*** materials to ensure quality
  - ***Preserving*** materials over long periods of time that may have future value
  - ***Providing Access*** to materials for the research community
  - ***Creating Economies of Scale*** for larger biospecimen resources
- **However, maintaining BRCs may be challenging and costly for individual institutions**

\*Jeffrey L. Furman and Scott Stern, "Climbing Atop the Shoulders of Giants: The Impact of Institutions on Cumulative Research," NBER Working Paper 12523, September 2006.



## Cost Recovery for Biospecimen Resources

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- **Cost recovery provides a mechanism for individual institutions to work with the NCI to maintain valuable biospecimen resources**
- **Importance of not exceeding cost recovery in developing user fees**
- **Possible effects of cost recovery on biospecimen access for future generations of researchers**
- **Challenge of defining cost recovery for different biospecimen resource and funding models**



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## **Biobanking Cost Recovery**

**Lisa B. Miranda, University of Pennsylvania  
Technical Director, Tumor Tissue and Biospecimen Bank (TTAB)  
University of Pennsylvania**





# Talk Objectives

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**Brief Overview: Biospecimen Resource Economic Issues**

**Brief Overview: Tumor Tissue and Biospecimen Bank**

**Brief Tutorial**

**oIntroduction to Cost Recovery**

oElucidate TTAB Cost Recovery Pathway

oBrief Highlight of TTAB Cost Recovery Model

oTTAB Cost Analysis 12 Step Walkthrough

oReview Strategies For User Fee Implementation



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# Brief Overview: TTAB

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**Penn**  
UNIVERSITY *of* PENNSYLVANIA

**Tumor Tissue and Biospecimen Bank**

TTAB Logo Graphics By Federico A. Valdivieso

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# TTAB's Mission

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## ***NEW UPENN SOM CORE Facility & Service Center***

➤ Sponsors: Pathology & Abramson Cancer Center

## **MISSION**

- Create Extensive, Robust Biospecimen & Data Repository
- Centralize Resources: Physical & Virtual Biobank
- Promote Internal & External Collaborations
- Harmonize University Biospecimen Banking efforts
- Standardize Data Collection & Annotation



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## Types of Services

- oBiospecimen Collection & Banking Support
- oTechnical Support
- oConsultation & Feasibility Review
- oProject Development & Management
- oCollection Inventory Management
- oPathology Case Review & Annotation
- oQuality Management
- oTraining & Education
- oHistology Services



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# TTAB Users

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## 3 Types of Users

### oPrivate PI Collections

- oClinical Trial OR Bench Researcher

- oLymphoma, Myeloma, Breast, GU, Lung, Etc...

### oDepartmental Biobanks

- oENT, GYN

### oVirtual Bank For External Institutions

- oUPITT & CDC- MVB Project



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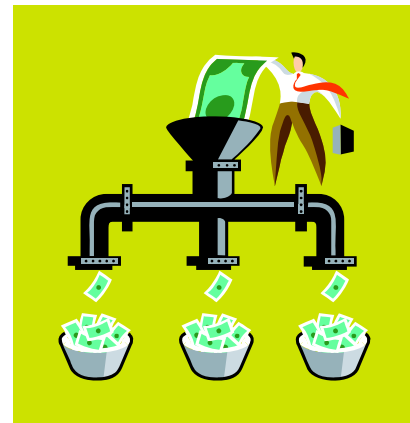
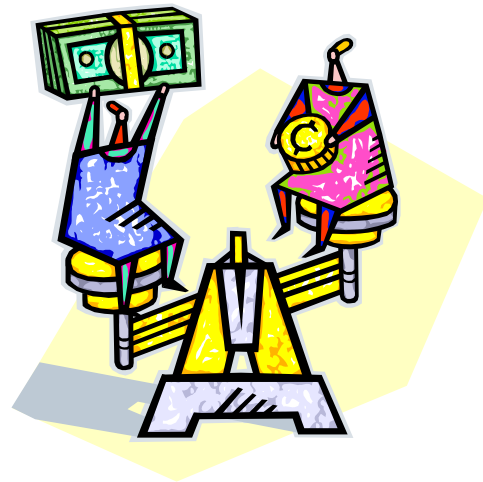
# Introduction To Cost Recovery

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- oWhat Does Fee For Service Really Mean?
- oWhat Does It Take To Be Revenue Neutral?
- oPro's & Con's of Cost Recovery
- oHow Implementation of Cost Recovery Can Support *NCI Best Practices*



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# Fee For Service Model

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***Most Common Model For Nonprofits***  
**Recouping ALL Costs**

- oDirect
- oOverhead

## **Mechanism:**

### **Fee for Service Social Enterprise Model**

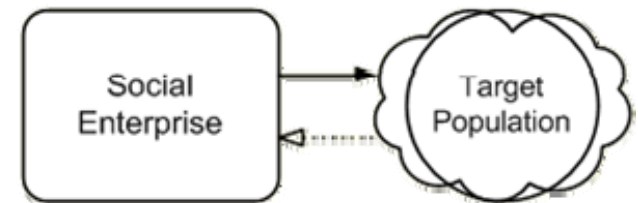
(Kim Alter, 2004)

#### **Pays For Expenses**

- oSalary Support (*Labor & Benefits*)
- oCapital Deprecation
- oService Contracts
- oSupplies & Consumables



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## ➤ Biospecimen Resource Fiscal Year Budget Goal





# Cost Recovery: *It's Good For You*

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## ***Invaluable Business Tool For Biorepository***

- oEstablish Real Costs
- oDevelop User Fees
- oBudgetary Planning
- oRevenue Projections & Predictions
- oResource Planning
- oEconomic Justification
- oGrant Planning
- oFinancial Proposals
- oFinancial Evaluations & Reporting



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# Cost Recovery:

## *Putting the Pieces Together*

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**Service Metrics**

**Pricing Structure**

**User Fee Development**

**Cost Analysis**

**Billing**

**Labor Rates**

**Effort Breakdowns**

**Revenue Projections**

**Needs Assessment**



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## *The Path To Cost Recovery Is Often Not Clear*

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MANY roads lead to the Path, but  
basically there are only two: reason and  
practice.

**Bodhidharma**

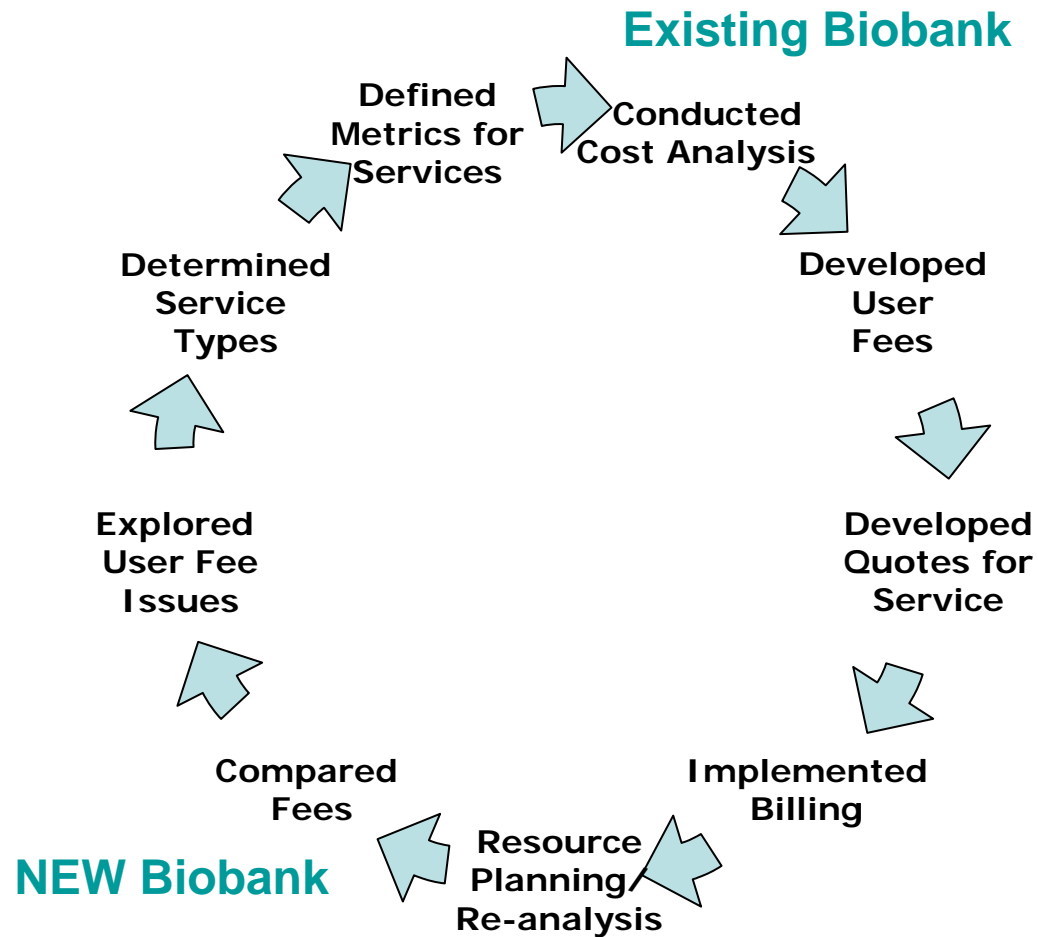


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# TTAB Cost Recovery Pathway

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## *The Dreaded Cost Analysis*

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Curiosity begins as an act of tearing to piece or analysis  
**Samuel Alexander**

If you don't have time to do it right, when will you have time  
to do it over?  
**John Wooden**



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# Cost Analysis: **The 12 Steps**

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User Fee Implementation

FY Revenue Projections

Pricing Development

User Fee Development

Capital Depreciation Rate

Service Contract Rate Assessment

Labor Service Metric Development

Lab & Facility Needs Assessment

FY Annual Billable Hours Calculation

Salary Effort Breakdowns

Organizational Chart

FY Narrative Overview



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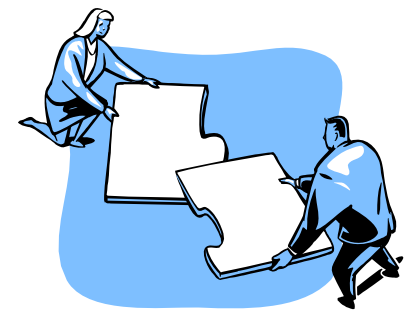
# User Fee Development: *Lets Get Granular*

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- o **User Fee Elements Include:**
  - o Labor
    - o *Direct*
    - o *General & Administrative*
  - o Direct Materials
  - o General Laboratory Supplies Fees
  - o Service Contract Fees
  - o Capital Depreciation



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# Implementation Of Cost Recovery:

## *Billing To Recoup Costs*

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### Setting Up Your Billing

#### o *DEVELOP*

- o Pricing Structure
  - o TTAB Examples
- o A Few Policies
- o Quotes
  - o Users
  - o Projects

#### o *DESIGN* Deliverable Document

#### o *DRAFT* Invoices



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*Why Effective Reporting Is Essential:  
True Knowledge Is A Powerful Thing*

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One cannot have economic growth without security.

**John Bruton**

The art of economics consists in looking not merely at the immediate but at the longer effects of any act or policy; it consists in tracing the consequences of that policy not merely for one group but for all groups.

**Henry Hazlitt**



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# How **You** Can Support Financial Best Practices: *Complete the Puzzle For Yourself*

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**Fiscal Accountability**

**Increased Self Reliance**



**Sustainable Development**

**Financial Empowerment**



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OBBR Office of Biorepositories  
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**Rosemarie Flynn, Assistant Director, Resource Planning & Analysis**  
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**Provided Initial SOM Cost Analysis Template**



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Questions?

*More Information?*

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## ***CONTACT***

**Lisa B. Miranda**

**Technical Director, TTAB**

**Tumor Tissue and Biospecimen Bank, University of  
Pennsylvania**

**Address:** Department of Pathology and Laboratory Medicine  
Division of Anatomic Pathology  
6.025 Founders Pavilion, 3400 Spruce Street  
Philadelphia, Pennsylvania. 19104-4283

**Phone:** 215-615-4744 (*Voicemail option*)

**Pager:** 215-308-7439 (*Text option*)

**Fax:** 215-349-5910

**Email:** mirandal@uphs.upenn.edu

**TTAB Website:**

**[www.med.upenn.edu/bncrc/tumor/index.shtml?tumor](http://www.med.upenn.edu/bncrc/tumor/index.shtml?tumor)**



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Biospecimen Resources...

We *NEED* TO TALK

*AND* We *ALL* Have Issues

These Are Just A Few...





## *This Talk Covered Some*

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### **How Do You**

- Create A Culture To Support A Fee For Service Approach?
- Use Cost Recovery To Engage Collaborators/End Users?

### **How Can You Use Cost Recovery To**

- Support Resource Planning & Aid Resource Growth?
- Aid Financial & Executive Reporting?

### **What Are Some Cost Recovery “Best Practice” Tips?**

### **What Are Key Strategies To Promote Adherence?**

### **How Can Cost Recovery**

- Support NCI Best Practices?
- Promote Data Sharing?
- Aid Implementation Of Ca tissue Tools & Offset Costs In Adoption?







## **BUT...Let's Talk Further** *A Few Things to Chew On*

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**What funding models exist for various biospecimen resources?**

- How do they vary among commercial, academic, Government resources?

**Is it possible to fully recover costs?**

- Is it desirable to fully recover costs? Will recovery of costs affect access?

**Will there be additional costs associated with implementing the NCI Best Practices?  
For informatics, equipment, QA/QC, personnel?**

**How will the costs to implement NCI's best practices differ in a small biorepository  
(1 or a few freezers) versus a large facility?**



**AND...Let's Talk Even Further**  
**BECAUSE...*YOUR Expertise Is PRICELESS***

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**Is it advantageous, from an operational and/or economic point of view, to consolidate biospecimen resources into larger centralized facilities?**

- Would a central resource be accepted in your organization?

**Is it possible to quantify the economic impact of a biospecimen resource?**

- Few studies have addressed this.

**Are there newer technologies available that can reduce costs now or in the near future?**

**Other issues based on your experience?**

**Jim Vaught, PhD**



*Cost Recovery:*  
*Do It Yourself*

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**Your Mother WAS Right**

**Try It, You'll Like It**



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**AND...**

**Cost Recovery Is *SO MUCH MORE***

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## **Cost Recovery Can Aid Evaluation Of 3 *Critical* NCI Questions:**

**How effectively has the resource performed?  
What impact has the resource had on research?  
Is there a continuing need for the resource?**



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**Related Source: NCI Website**





## Say It All With Numbers

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# Cost Recovery Can Demonstrate Financial *Performance* Of The Biospecimen Resource

### **Financial *Performance* Measures Include:**

- \$\$ worth of specimens the resource has provided to researchers
- \$\$\$ value of projects & researchers supported with specimens/services from the resource
- \$\$\$ value of different specimen types that the resource has provided
- \$\$\$ value of difficult to obtain specimens made available to researchers by the resource
- Funds recouped from Collections/Distributions/Biorepository Services
- Funds recouped from repeat requests
- Grant Funding/New projects funded from Biospecimen Resource related publications
- Cost efficiency reporting (\$\$\$ Saved to Users)
- Per Specimen Savings



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Related Source: NCI Website

## What's YOUR Impact?

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### Cost Recovery Can Demonstrate *Financial IMPACT* Of A Biospecimen Resource

#### **Financial *Impact* Measures Include:**

- The financial value of published studies using resource specimens
- The financial impact on your Institution from resource-related papers
- Determination of Cost per critical research finding.

The financial value from the Biospecimen Resource's contribution towards:

- FDA approval of a medical device
- Development of useful technologies
- Development of useful research techniques
- Financial Feedback from users:
- Impact of the resource on their research



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Related Source: NCI Website



## Everyone *Wants To Be Needed*

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### Cost Recovery Can Demonstrate *Continuing Need To Stakeholders AND Aid Resource Planning*

**Key *Continuing Need* Evaluation Questions include:**

Is the resource meeting its financial objectives?

Is the Use Cost Effective?

Is the Resource Financially Viable OR promoting sustainable development?

Is the Value of specimens (and data) being provided (collected) worth the cost of running the Facility?

What level of facilitation of scientific progress is necessary to support cost of operations?

Has the resource improved financial issues regarding access to specimens for PI's?

Evaluation of Financial issues related to duplication of effort

Are PI based banks competing with OR impeding funding for central biospecimen resource?

Is the resource still needed?

Financial comparison of alternative specimen sources

Does the resource still need NCI support or can it support itself?



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Related Source: NCI Website