# ClinicalTrials.gov Modernization

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## **ClinicalTrials.gov as part of NLM**

# As part of NLM, ClinicalTrials.gov makes study record data available.

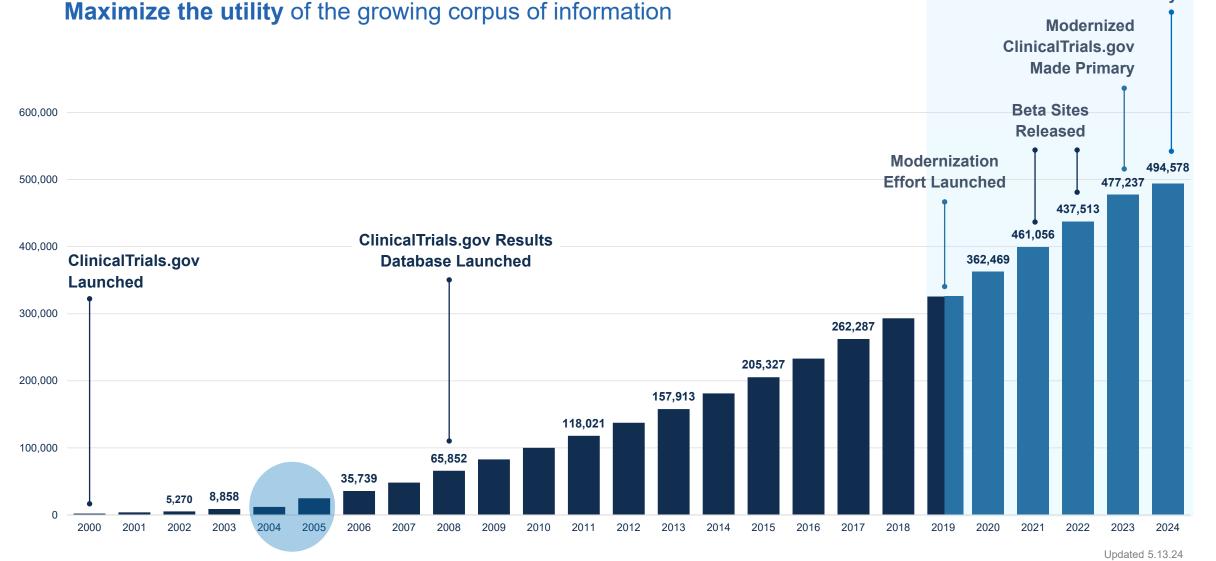
- ClinicalTrials.gov provides access to study data, but does not own the data.
- Sponsors are responsible for the data that appear on the website.
- Supporting materials and information related to study records are presented in plain language whenever possible.





## **Modernization Timeline**

PRS Protocol Registration Made Primary





National Library of Medicine

# **ClinialTrials.gov Modernization Effort**

Vision:

Ensure that ClinicalTrials.gov continues to be a trusted and valued premier public health resource that provides maximum value to the public and serves its mission well into the future.

#### **Strategic Goals:**



Improve the user experience.



Upgrade the technical infrastructure and processes to enhance sustainability.



Support the existing legal, regulatory, and policy framework.



# **ClinicalTrials.gov Modernization Overview**





X

YEAR 2 Development



YEAR 3 Implementation



YEAR 4 More Releases and Refinements



YEAR 5 Launches and Landings

- Engaged stakeholders to determine and validate approach and specifications
- Enhanced internal business processes
- Developed modernization roadmap

- Developed new product experiences
- Launched ClinicalTrials.gov Beta
- Communicated availability of the beta release to stakeholders

- Launched Protocol Registration and Results System (PRS) Beta
- Conducted usability research and made iterative improvements to the beta sites
- Launched the modernized ClinicalTrials.gov website
- Released PRS Beta
   protocol registration

- Continue updates
   and refinements
- Retire the classic ClinicalTrials.gov on June 25, 2024
- Launch the modernized PRS protocol registration
- Release PRS Beta results
   submission



## **ClinicalTrials.gov Primary Users**



#### Patients and Health Care Professionals

Find studies that patients may be able to join

Learn about clinical research



#### **Researchers**

Look for studies available on a specific topic

Identify unmet research and medical needs



#### Sponsors and Investigators

Submit their study information

Keep the study record up-todate, which may include adding results from when the study ends



# **User Research**

## Modernization is a user-centered process.

1,000+

Comments with ideas for improving the PRS and public site from a request for information (RFI) in 2020 and comments received from an expert review

# 100+

Interviews to date with data submitters, data researchers, patients, and patient advocates

4,500+

Feedback comments submitted by users of the beta public site 17

Board of Regents Working Group meetings to provide expert user input to the design and development process



## How We Got Here

"I want search to be as easy as Google." "I want advanced search on the homepage."



"I want to understand more info for my search results and study record."



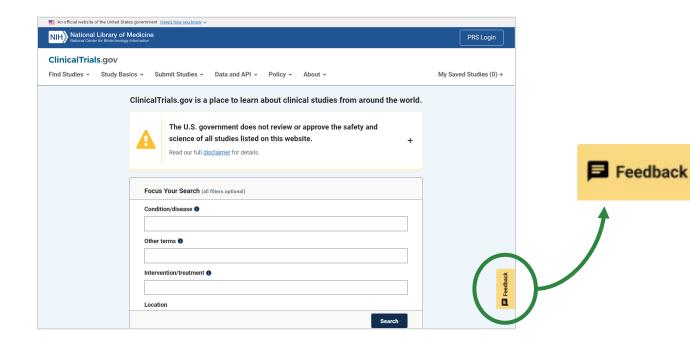
"I want to see as much study data in as small a space as possible on the homepage."



"I want to enter my trial info as fast and as easily as possible even if that means the info available in API and the public site isn't as complete as it could be."



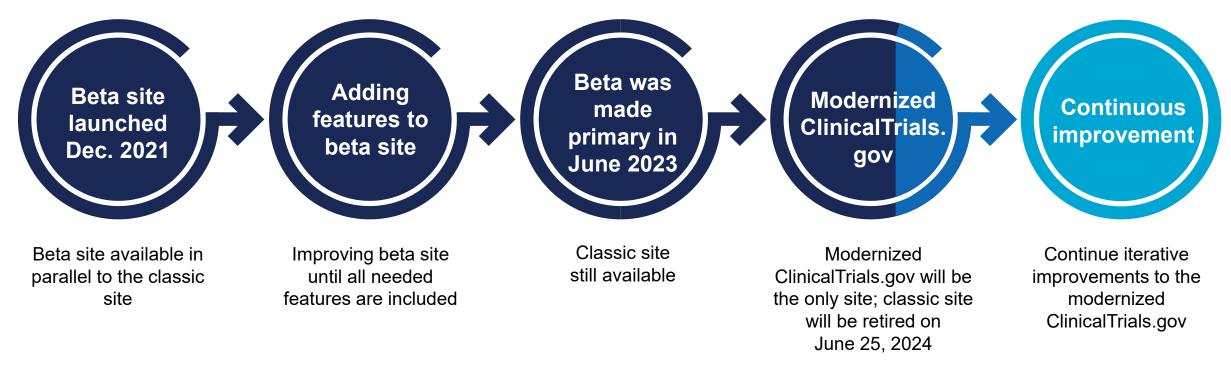
## **ClinicalTrials.gov User Feedback Process**



- We read every single comment.
- We analyze the feedback continuously to identify bugs and issues/requests that come up repeatedly and warrant a change.
- Users who provide an email address with their comment are often invited to participate in Zoom sessions or other activities (e.g., taking a survey) to provide further feedback.

## How Users See Change: ClinicalTrials.gov Website

- Continuous Feedback -----



Updated 5.13.24

## Sample Improvements to ClinicalTrials.gov

An official website of the United States governme	ment Here's how you know ~		An official website of the United States government
National Library of Medicin	ne ,	PRS Login	Here's how you know. ~
Clinical Trials.gov			NIH National Library of Medicine National Center for Biotechnology Information
Find Studies 🗸 Study Basics 🗸	Submit Studies 🗸 Data and API 🖌 Policy 🗸 About 🗸	My Saved Studies (0) →	ClinicalTrials.gov Menu
	ClinicalTrials.gov is a place to learn about clinical studies from around the world.		ClinicalTrials.gov is a place to learn about clinical studies from around the world.  The U.S. government does not review or approve the safety and science of all studies listed on this website.  Cardion full disclaimer for details.  Focus Your Search (all filters optional)  Condition/disease  Intervention/treatment  Location Search by address, city, state, or country and
L	More Filters + Search	E.	select from the dropdown list



## **Sample Improvements to Search Results**

Focus Your Search (all filters optional)	Search Results Viewing 1-10 out of 794 studies Showing results for: Stage II Breast Cancer   Funded by NIH	Search Results Viewing 1-10 out of 794 studies Showing results for: Stage II Breast Cancer   Funded by NIH + Synonyms of conditions or disease (54)
Stage II Breast Cancer	+ Synonyms of conditions or disease (54)	
Other terms 0	None Selected 🛓 🔲	▼ Focus Your Search (2)
Intervention/treatment 0	COMPLETED NCT01431196	None Selected
Location Search by address, city, state, or country and select from the dropdown list	Trial With Autologous Dendritic Cell Vaccination in Patients With Stage II-III         HER2 Negative Breast Cancer         conditions         Stage II Breast Cancer         Locations	NCT01431196 Trial With Autologous Dendritic Cell Vaccination in Patients With Stage II-III HER2 Negative Breast Cancer Conditions Stage II Breast Cancer
Study Status 0	Pamplona, Navarra, Spain	Stage III Breast Cancer
Looking for participants Not yet recruiting (7)		Locations
Recruiting (57)		💡 Pamplona, Navarra,
Active, not recruiting (69)	Taking AIM at Breast Cancer conditions	■ RECRUITING NCT04720209
Terminated (107)	Breast Cancer Stage II Breast Cancer Breast Cancer Stage I Breast Cancer Stage III Locations  Solution Solutio	Taking AIM at Breast Cancer
Clear Filters (2) Apply Filters	Boston, massacrusetts, onited states (2)	Breast Cancer Stage II Breast Cancer Breast Cancer Stage I

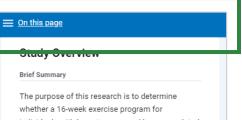


#### ClinicalTrials.gov

Breast Cancer Stage III

## **Sample Improvements to Study Record**

Taking AIM at <mark>Breast</mark> C	ancer			
ClinicalTrials.gov ID ① NCT047 Sponsor ① Dana-Farber Cancer Information provided by ① Chri Last Update Posted ① 2024-01	Institute stina Dieli-Conwright, PhD, Dana-Farber Cancer Ins	stitute (Responsible Party)		
± □			+ Expand al	I content — Collapse all content
Study Details Re	searcher View No Results Poste	ed Record History		
On this page Study Overview	Study Overview			Study Start (Actual) 🕕
Contacts and Locations Participation Criteria	The purpose of this research is to determin	Brief Summary The purpose of this research is to determine whether a 16-week exercise program for individuals with breast cancer and have completed treatment (i.e., surgery, chemotherapy, or radiation) for breast cancer will decrease inflammation in fat tissue. Detailed Description This study is about using different types of exercise to reduce inflammation in fat tissue in an effort to minimize the risk of cancer recurrence related to being overweight or obese. The investigators hope to		2021-08-13
Study Plan Collaborators and Investigators				Primary Completion (Estimated) • 2025-06-15
Publications Study Record Dates	minimize the risk of cancer recurrence rela			Study Completion (Estimated) 2026-06-15
More Information	learn whether participating in a specific exercise program can cause inflammation in the fat tissue to decrease.		Enrollment (Estimated) <b>1</b>	
	The names of the study interventions invol	-		300 Study Type <b>O</b>
	+ <u>Show more</u>			Interventional



whether a 16-week exercise program for individuals with breast cancer and have completed treatment (i.e., surgery, chemotherapy, or radiation) for breast cancer will decrease inflammation in fat tissue.

#### Detailed Description

This study is about using different types of exercise to reduce inflammation in fat tissue in an effort to minimize the risk of cancer recurrence related to being overweight or obese. The investigators hope to learn whether participating in a specific exercise program can cause inflammation in the fat tissue to decrease. + Show more

#### Official Title

Taking AIM at **Breast Cancer**: Targeting Adiposity and Inflammation With Movement to Improve Prognosis in **Breast Cancer** Survivors

Conditions 1	
Breast Cancer Breast Cancer Stage I	
Breast Cancer Stage II	
Breast Cancer Stage III	
	Feedback
Intervention / Treatment 0	eedl
Other: CARE	Ē
Other: TARE	
Other: Home-Based Stretching	



## Modernized ClinicalTrials.gov Features

	Search Experience	Study Record Experience	Easy-to-Find and Easy-to-Use Content	
AVAILABLE	Download (JSON, CSV) Search v 3 Search Results—Table View v 2 Enhanced search UI Print view of search results Save search/get search updates Application programming interface (API) v 2	Expanded study record data Fast Healthcare Interoperability Resources (FHIR) API pilot Print view of study registration Table view of study record Study record history v 4	Learn About Studies About ClinicalTrials.gov Learn About FHIR Data About Studies API documentation Information Architecture Content migration Support materials for using search	
FUTURE	Rewrite ingest Additional download format(s) Expert search capabilities Search Results—Table View v 3	Patient next steps		



Updated 5.13.24





#### **ClinicalTrials.gov Modernization Outreach and Engagement**

Updated 5.8.24

Social media posts sent from NCBI and NLM accounts to an audience of 850,000+



# 4,500+

Feedback comments submitted by users of the beta public site







Communications sent or posted to an audience of 50.000+

including 41 Hot off the PRS! (audience of 16K), 35 News & Updates, 12 NLM Technical Bulletins, 7 NLM Announces, 1 OER Open Mike, 1 NLM News

## 100 +

Interviews with data submitters, data researchers, patients, and patient advocates



5

Educational

1.800+ times

Webinars reaching **1,900+** attendees

5



Progress reports viewed 1.400+ times

**Blogs\* including** 5 Musings from the Mezzanine posts (audience of 500,000) and 2 NCBI Insights Blog posts (audience of 700+).

Count includes 2 mentions from Musings from the Mezzanine and 2 Musings from the Mezzanine -Director's Updates.

# 1,000+

**Comments** with ideas for improving the PRS and public site from an RFI in 2020 and from an expert review

## **NLM Board of Regents** Working Group

meetings to provide expert user input to the design and development process



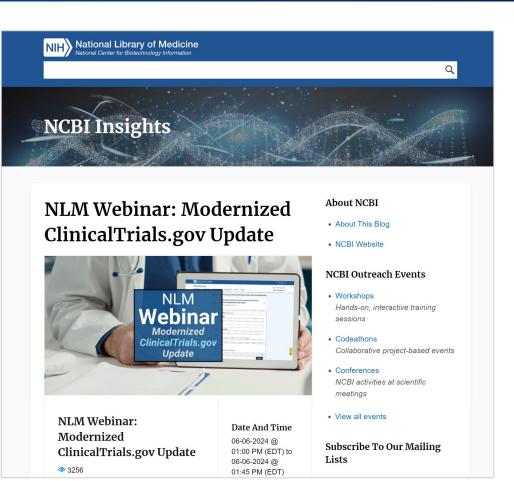
## **Modernization Webinar**



## Join us on June 6, 2024, at 1-1:45 p.m. ET

### ClinicalTrials.gov staff will:

- Share an update on the overall modernization effort,
- Highlight features of the modernized website, and
- Help users prepare for the retirement of the classic ClinicalTrials.gov







## Ways to Learn More



## **About Modernization**

https://clinicaltrials.gov/ct2/aboutsite/modernization



## **Frequently Asked Questions**

https://clinicaltrials.gov/ct2/manage-recs/faq



# Stay up to date with the Hot Off the PRS! e-bulletin

https://bit.ly/33qcZBb



# Thank you!



National Library of Medicine