



# Mouse-Mammary

## Summary

This collection consists of magnetic resonance images (MRI) of genetically engineered mouse models (GEMMs) of breast cancer. These images were acquired as part of a Department of Defense (DOD) Breast Cancer Research Program (BCRP) Postdoctoral Award W81XWH-12-1-0307 entitled “ *Investigating Ductal Carcinoma in Situ Using Noninvasive Imaging of Genetically Engineered Mouse Models*”

A particular emphasis of this project was to study the earliest stages of breast cancer—preinvasive ductal carcinoma *in situ* (DCIS)—and to interrogate the underlying genetic events that influence progression into invasive disease. In particular, we focused on the role of perturbed Rb, p53 and BRCA1 functionality and how these pathways, acting alone and in combination, can influence the development and progression of DCIS. GEMMs serve as an excellent model system wherein genetic changes can be controlled and manipulated over time. *In vivo* MRI is a superb technique for noninvasively tracking and characterizing these microscopic early stage cancers as they develop, change and transition into lethal invasive disease.

For more information, please contact Dr. Sunny Jansen ([jansensa0@gmail.com](mailto:jansensa0@gmail.com)).

## Acknowledgements



We would like to acknowledge the individuals and institutions that have provided data for this collection:

- **National Cancer Institute (Frederick, Maryland)** - Special thanks to **Sunny Jansen, PhD** from the Department of **Mouse Cancer Genetics Program**.

### Data Access

## Data Access

Click the **Download** button to save a ".tcia" manifest file to your computer, which you must open with the [NBIA Data Retriever](#) . Click the **Search** button to open our Data Portal, where you can browse the data collection and/or download a subset of its contents.

Data Type	Download all or Query/Filter
Images (DICOM, 8.6GB)	 

Click the Versions tab for more info about data releases.

### Detailed Description

## Detailed Description

Collection Statistics	
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Modalities	MR
Number of Participants	32
Number of Studies	149
Number of Series	205
Number of Images	23,487
Images Size (GB)	8.6

A presentation about a related Mouse GBM data set can be found at: [Sunny\\_jansen\\_NBIA\\_mouseGBM\\_update\\_ICR\\_508.ppt](#) .

#### **Citations & Data Usage Policy**

Users of this data must abide by the [TCIA Data Usage Policy](#) and the [Creative Commons Attribution 3.0 Unported License](#) under which it has been published. Attribution should include references to the following citations:

#### **Data Citation**

Jansen, Sunny, Ileva, Lilia, Lu, Lucy, & Van Dyke, Terry. (2015). TCIA Mouse-Mammary Collection. The Cancer Imaging Archive. <https://doi.org/10.7937/K9/TCIA.2015.9P42KSE6>

#### **TCIA Citation**



Clark K, Vendt B, Smith K, Freymann J, Kirby J, Koppel P, Moore S, Phillips S, Maffitt D, Pringle M, Tarbox L, Prior F. (2013) **The Cancer Imaging Archive (TCIA): Maintaining and Operating a Public Information Repository**, Journal of Digital Imaging, Volume 26, Number 6, pp 1045-1057. DOI: <https://doi.org/10.1007/s10278-013-9622-7>

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#### **Versions**

### **Version 1 (Current): Updated 2015/03/18**

Data Type	Download all or Query/Filter
Images (8.6GB)	 
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