

# Breast Metastases to Axillary Lymph Nodes (SLN-Breast)

## Summary

The detection of breast cancer metastases to lymph nodes is of great prognostic value for patient treatment. Using machine learning to detect metastatic breast cancer to lymph nodes can increase efficiency of pathologist diagnosis and ultimately ensure patients are accurately staged for prospective treatment. This dataset allows for the objective comparison of breast cancer metastases detection algorithms.

The dataset consists of 130 de-identified whole slide images of H&E stained axillary lymph node specimens from 78 patients. Metastatic breast carcinoma is present in 36 of the WSI from 27 patients. No patient inclusion/exclusion criteria were followed. No slide inclusion/exclusion criteria were followed. The slides were scanned at Memorial Sloan Kettering Cancer Center (MSKCC) with Leica Aperio AT2 scanners at 20x equivalent magnification (0.5 microns per pixel). Together with the slides, the class label of each slide, either positive or negative for breast carcinoma, is given. The slide class label was obtained from the pathology report of the respective case.

### Data Access

#### Data Access

| Data Type               | Download all or Query/Filter  |
|-------------------------|---|
| Images (.SVS, 53 GB)    |   |
| Supplemental Data (CSV) |   |

Click the Versions tab for more info about data releases.

### Detailed Description

#### Detailed Description

| Image Statistics       |           |
|------------------------|-----------|
| Modalities             | Pathology |
| Number of Participants | 78        |
| Number of Images       | 130       |
| Images Size (GB)       | 53        |

#### Explanation of target.csv files

target.csv contains a binary label for each slide image in the dataset.

- target=1 means that the image contains breast cancer metastases.
- target=0 means that the image does not contain breast cancer metastases.

#### Citations & Data Usage Policy

## 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

"Campanella, G., Hanna, M. G., Brogi, E., & Fuchs, T. J. (2019). Breast Metastases to Axillary Lymph Nodes [Data set]. The Cancer Imaging Archive. <https://doi.org/10.7937/tcia.2019.3xbn2jcc>"

### Publication Citation

"Clinical-grade Computational Pathology using Weakly Supervised Deep Learning on Whole Slide Images", Gabriele Campanella, Matthew G. Hanna, Luke Geneslaw, Allen Mirafior, Vitor Werneck Krauss Silva, Klaus J. Busam, Edi Brogi, Victor E. Reuter, David S. Klimstra, Thomas J. Fuchs, Nature Medicine, July 2019

### 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. **The Cancer Imaging Archive (TCIA): Maintaining and Operating a Public Information Repository**, Journal of Digital Imaging, Volume 26, Number 6, December, 2013, pp 1045-1057. DOI: [10.1007/s10278-013-9622-7](https://doi.org/10.1007/s10278-013-9622-7)

## Other Publications Using This Data

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### Versions

#### Version 1 (Current): Updated 2019/07/18

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