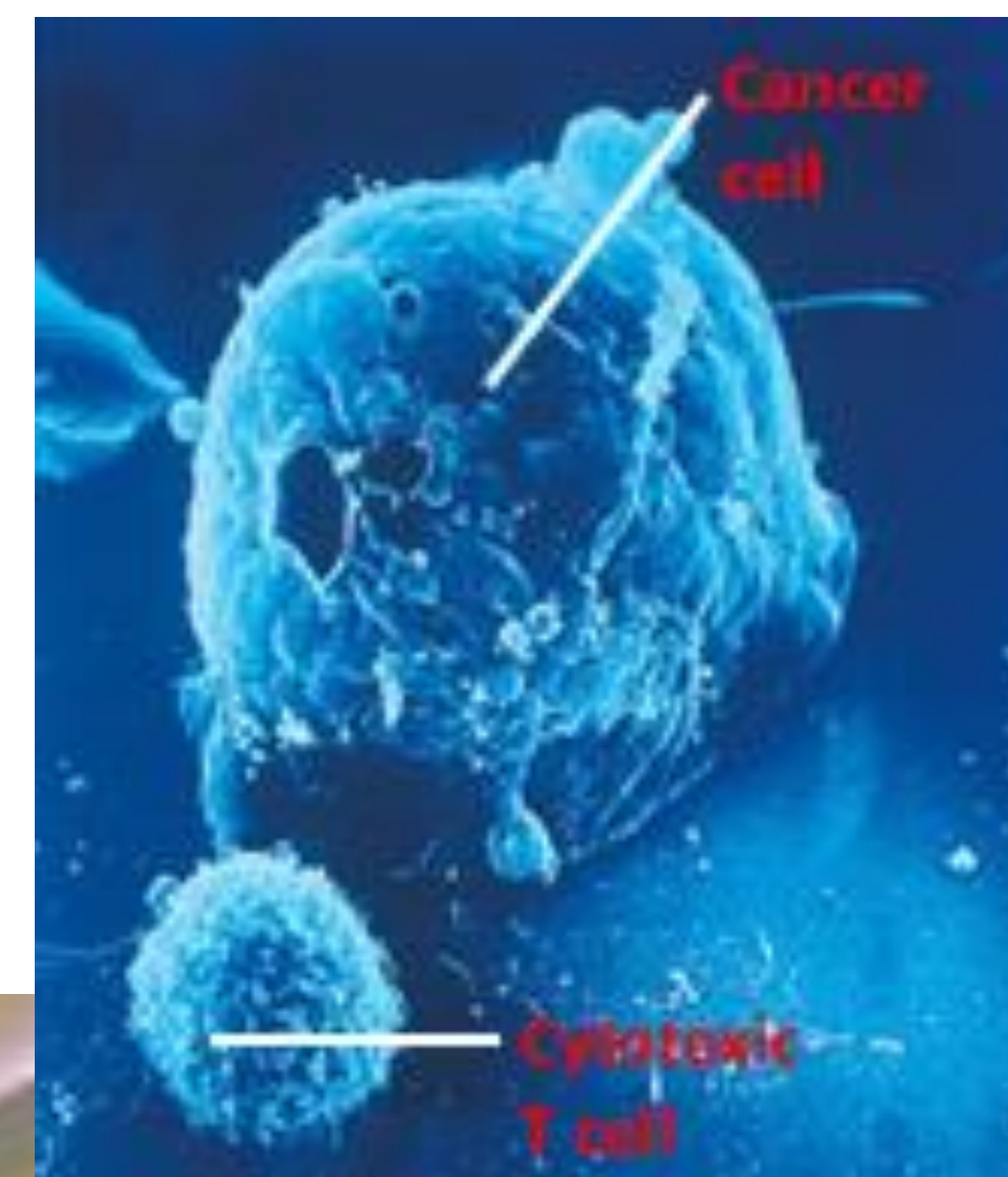


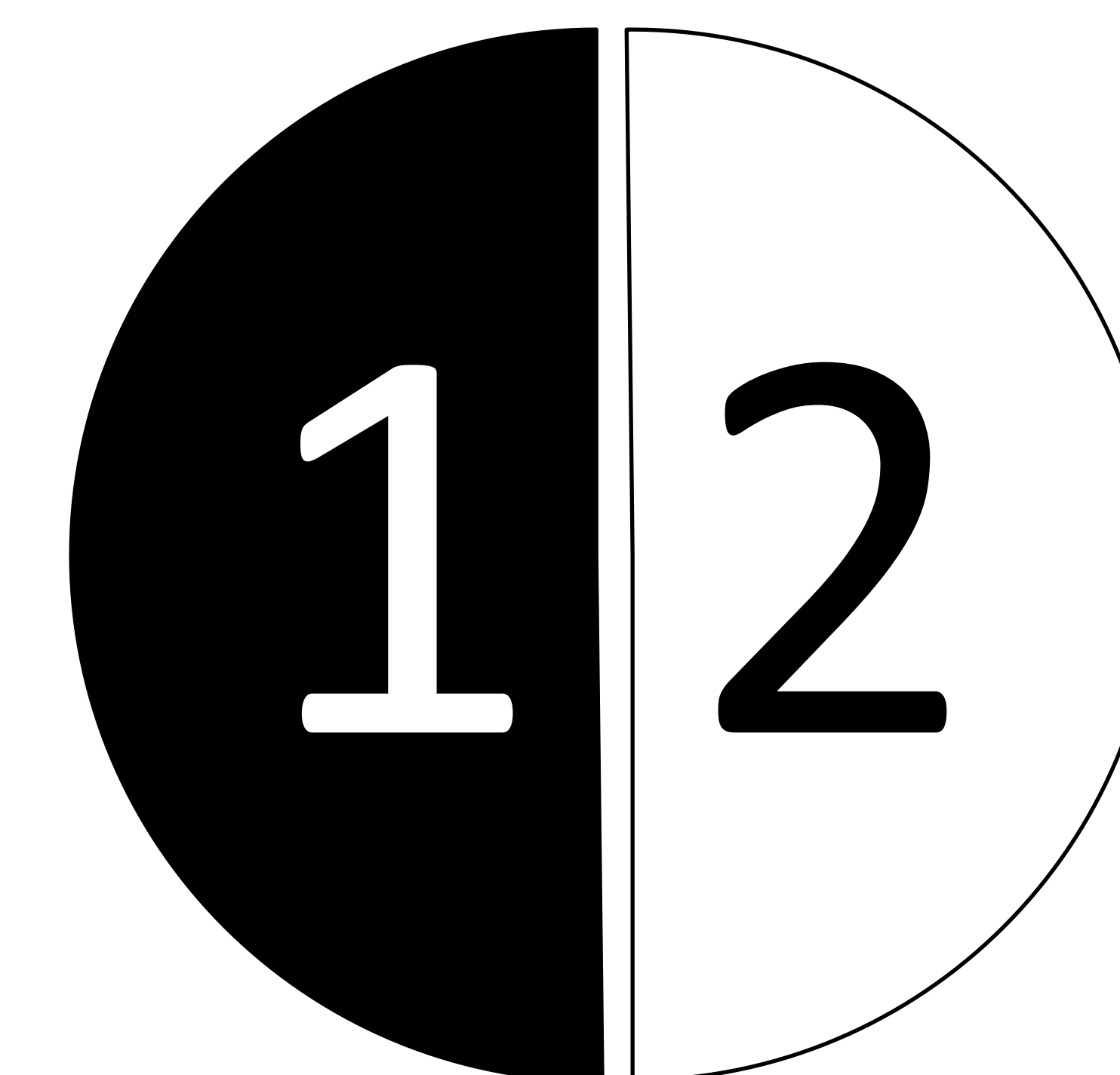
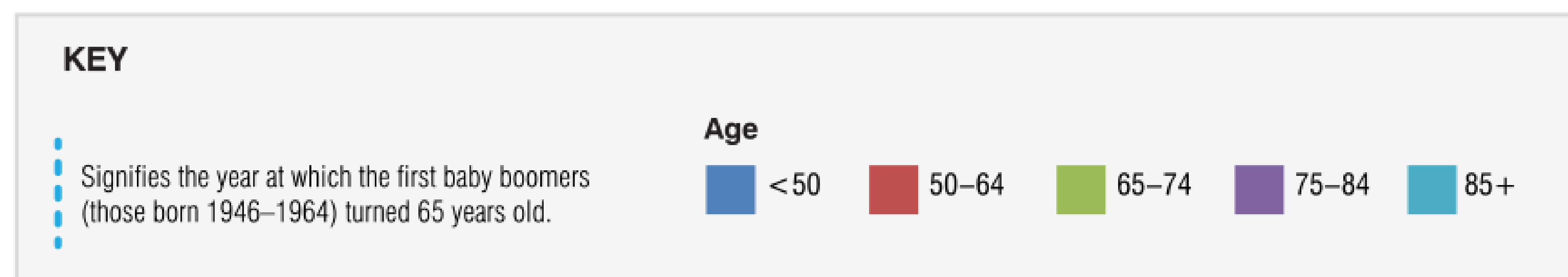
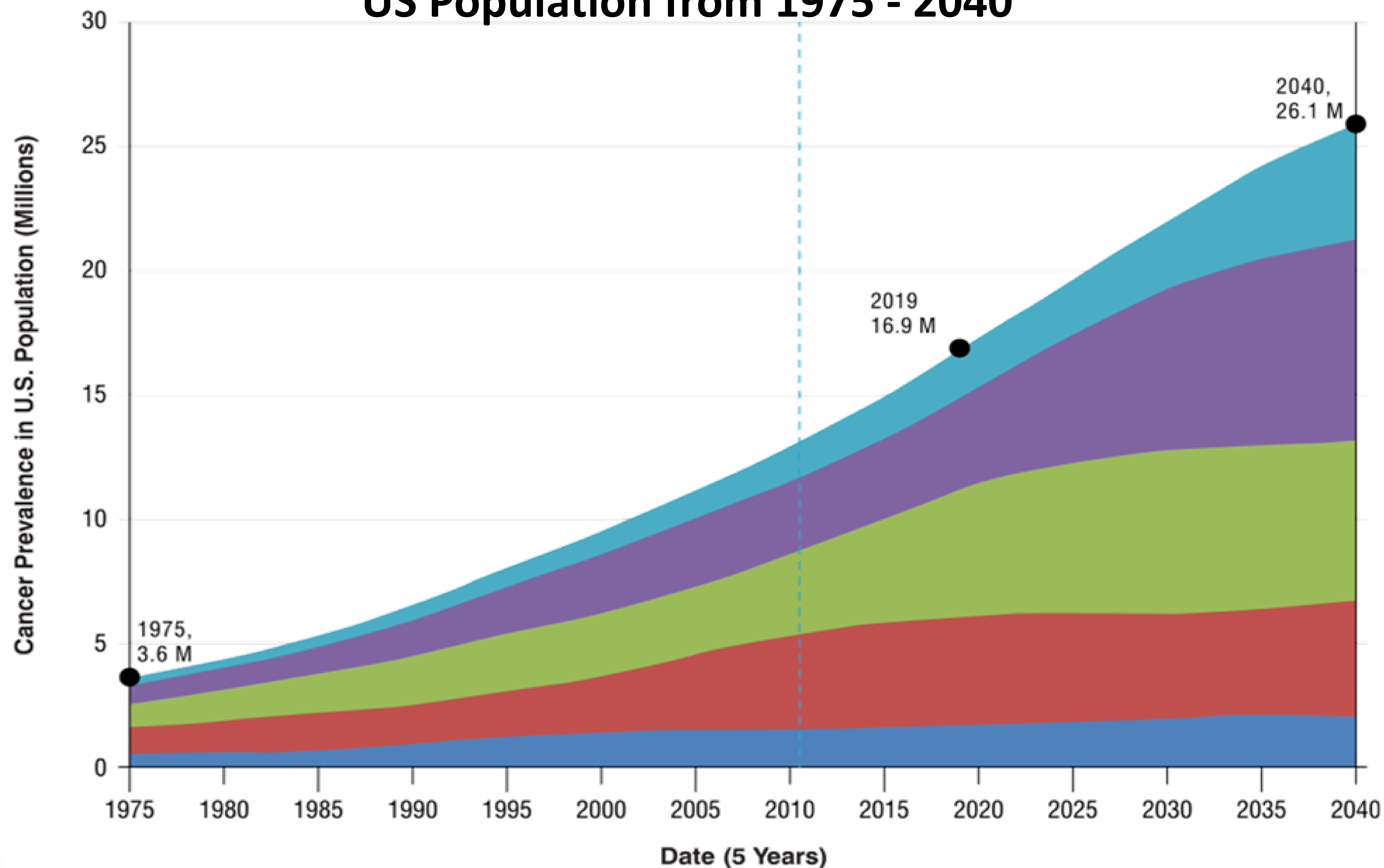
Tobacco Master Settlement Agreement Funds Are Saving Lives In Kentucky

Jason Chesney, M.D., Ph.D.
Director and Chief Administrative Officer

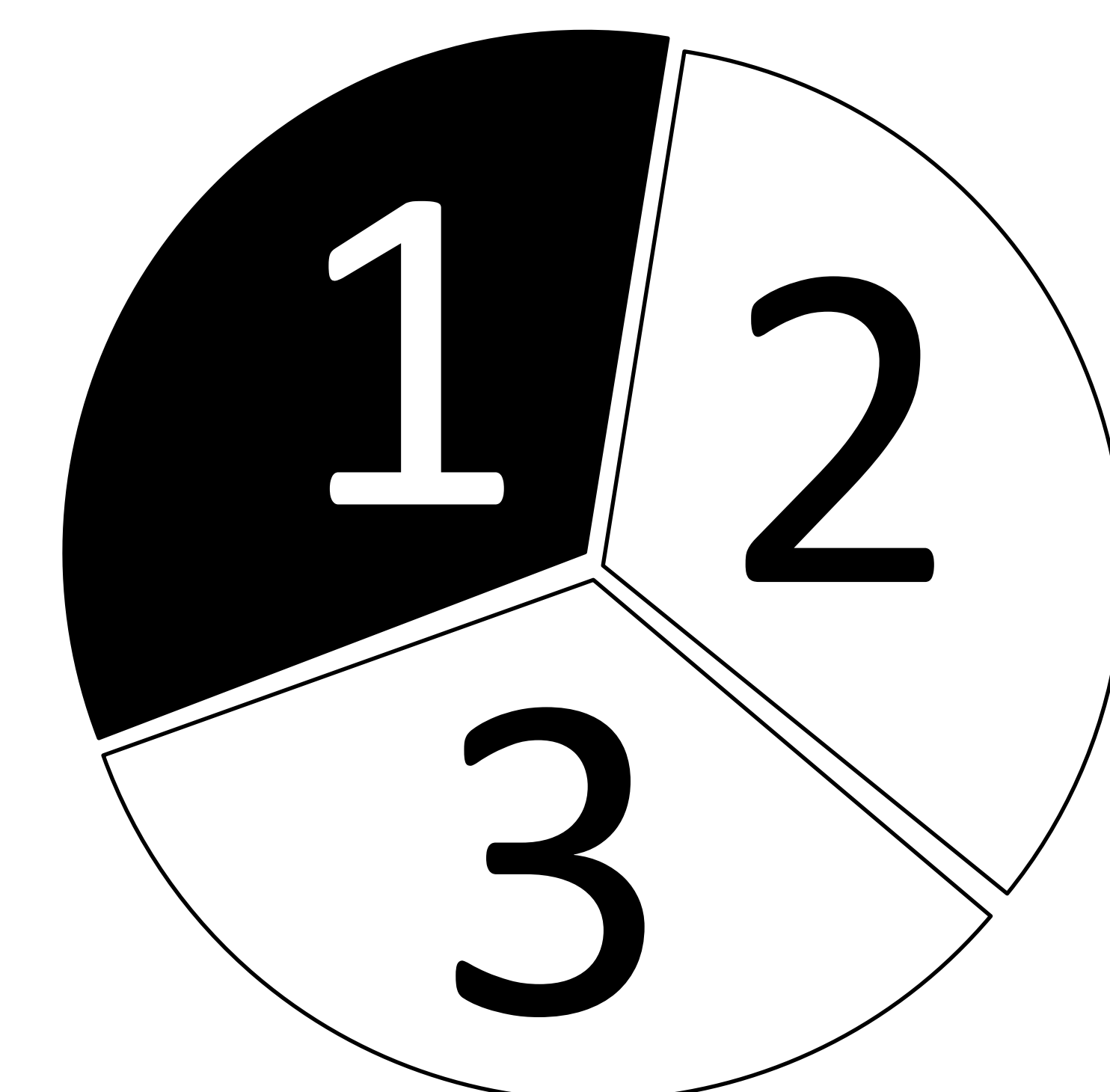


Cancer Will Affect 50% More People by 2040

Cancer Prevalence and Projections in the US Population from 1975 - 2040

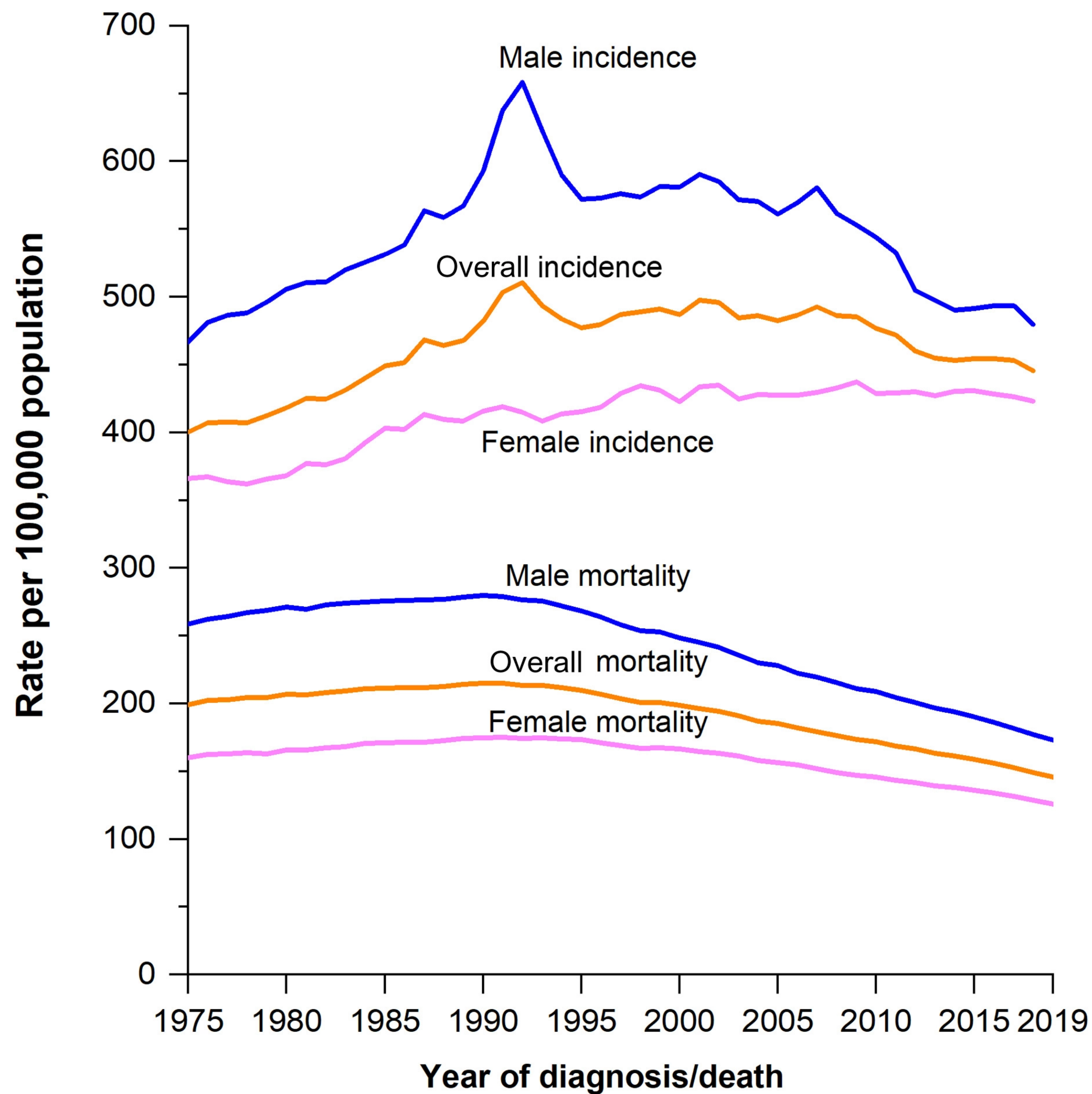


males
get cancer

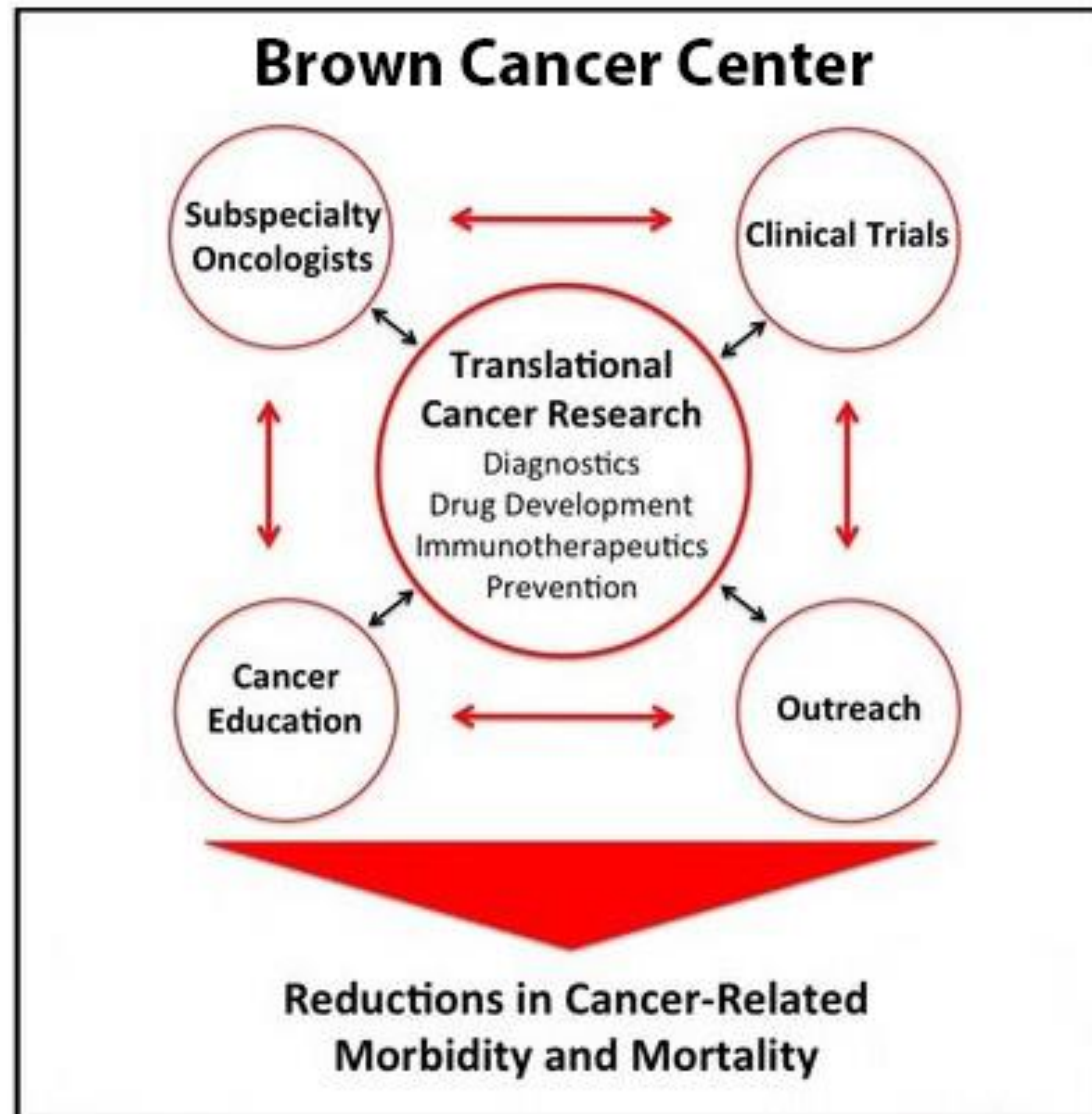


females
get cancer

Cancer Death Rates Are Dropping



What Are We Doing About Cancer?



Brown Cancer Center

UL Health

Multi-Disciplinary Cancer Subspecialty Clinics



Benign Hematology



Blood Cancers, Cellular
Therapeutics &
Transplant Program



Breast Cancer



Endocrine Cancer



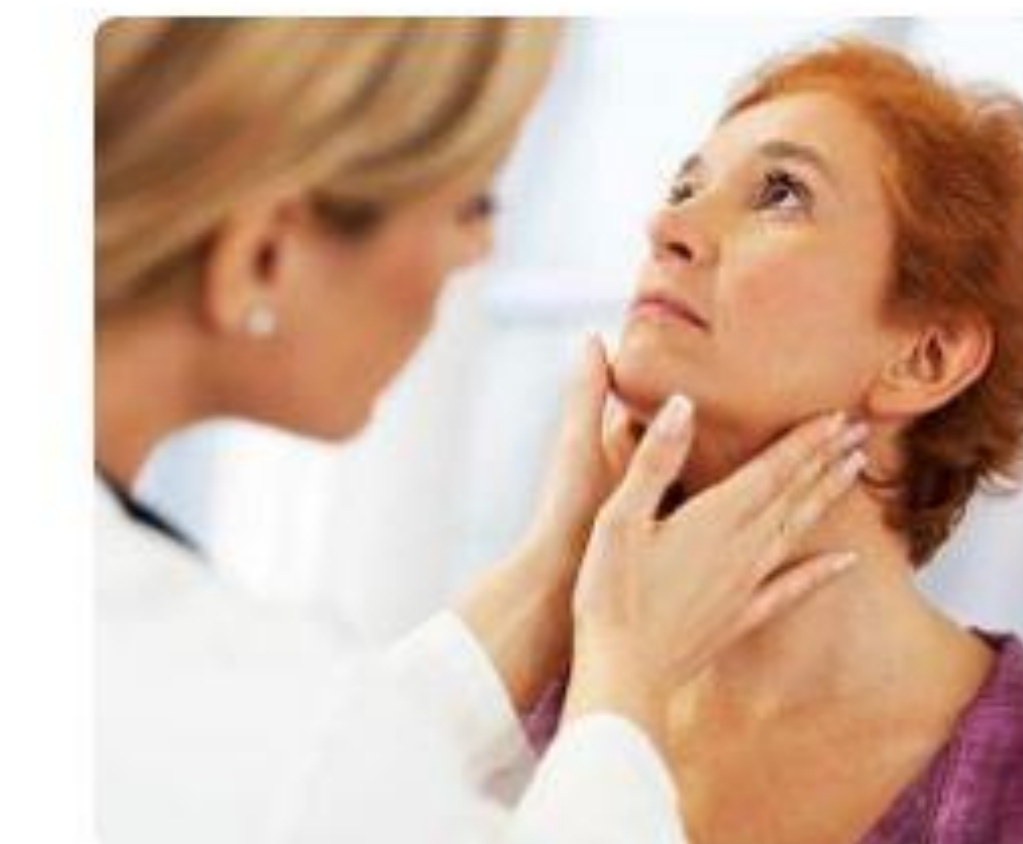
Gastrointestinal Cancer



Genitourinary Cancer



Gynecologic Oncology



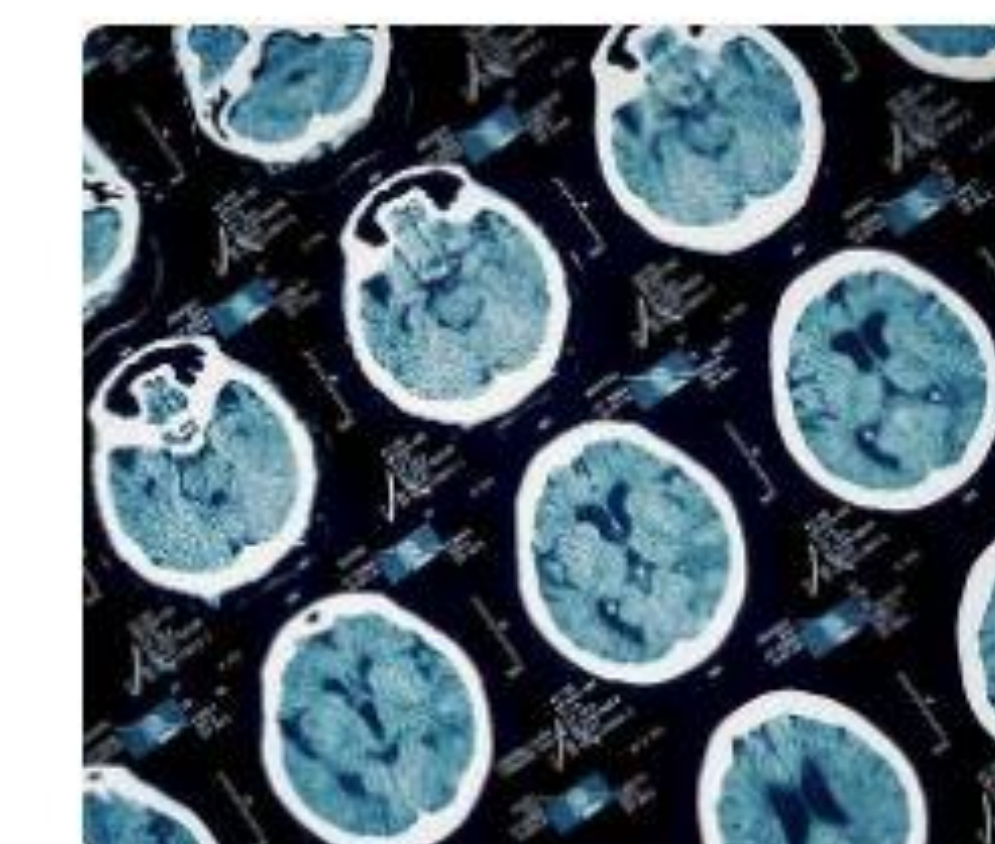
Head & Neck Cancer



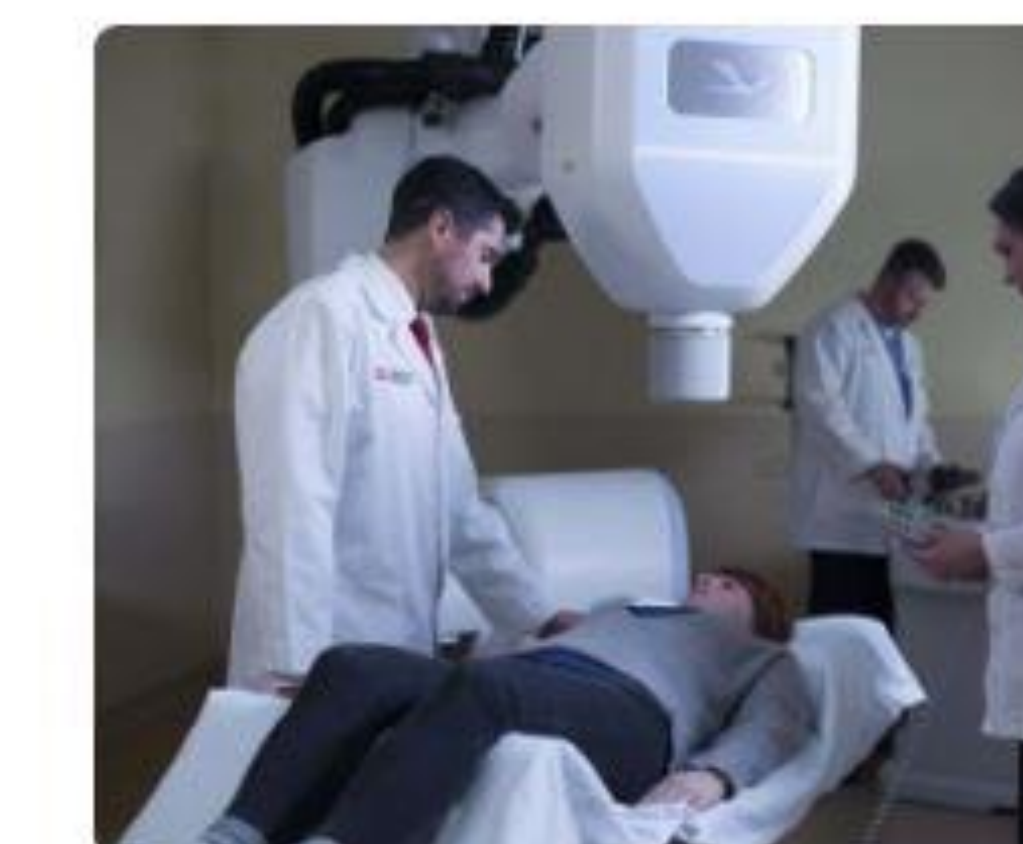
Lung Cancer



Medical Oncology



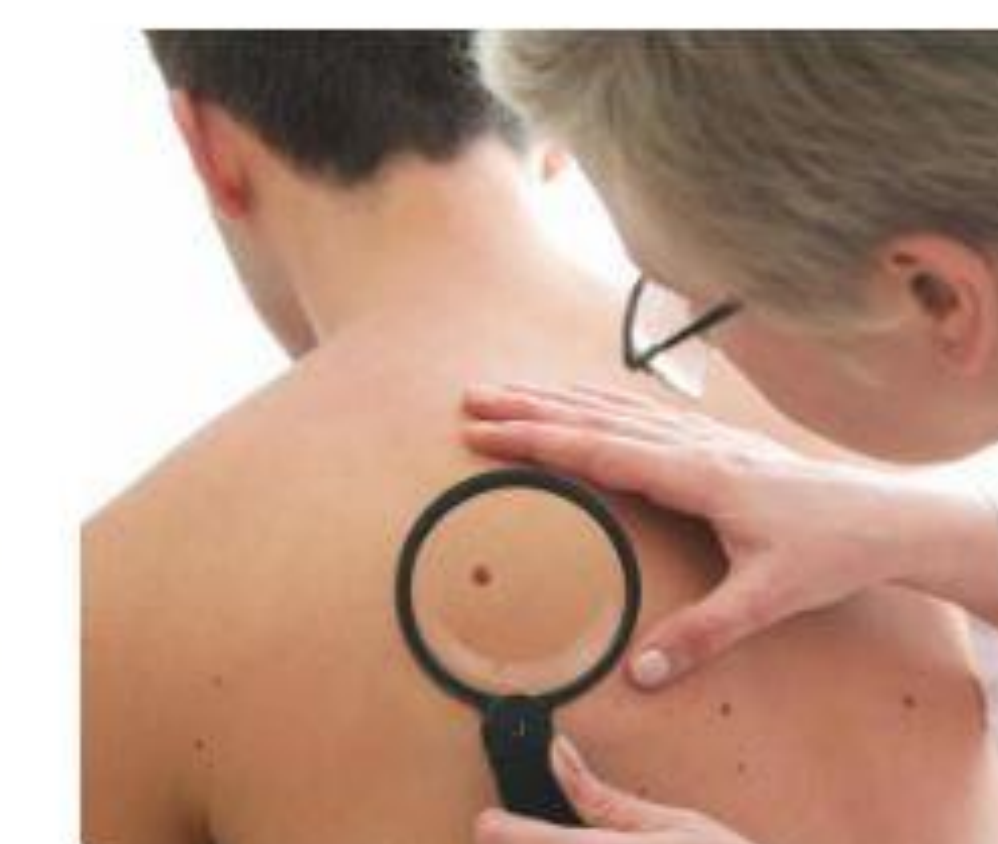
Neuro-Oncology



Radiation Oncology



Sarcoma & Bone Cancer



Skin Cancer & Melanoma



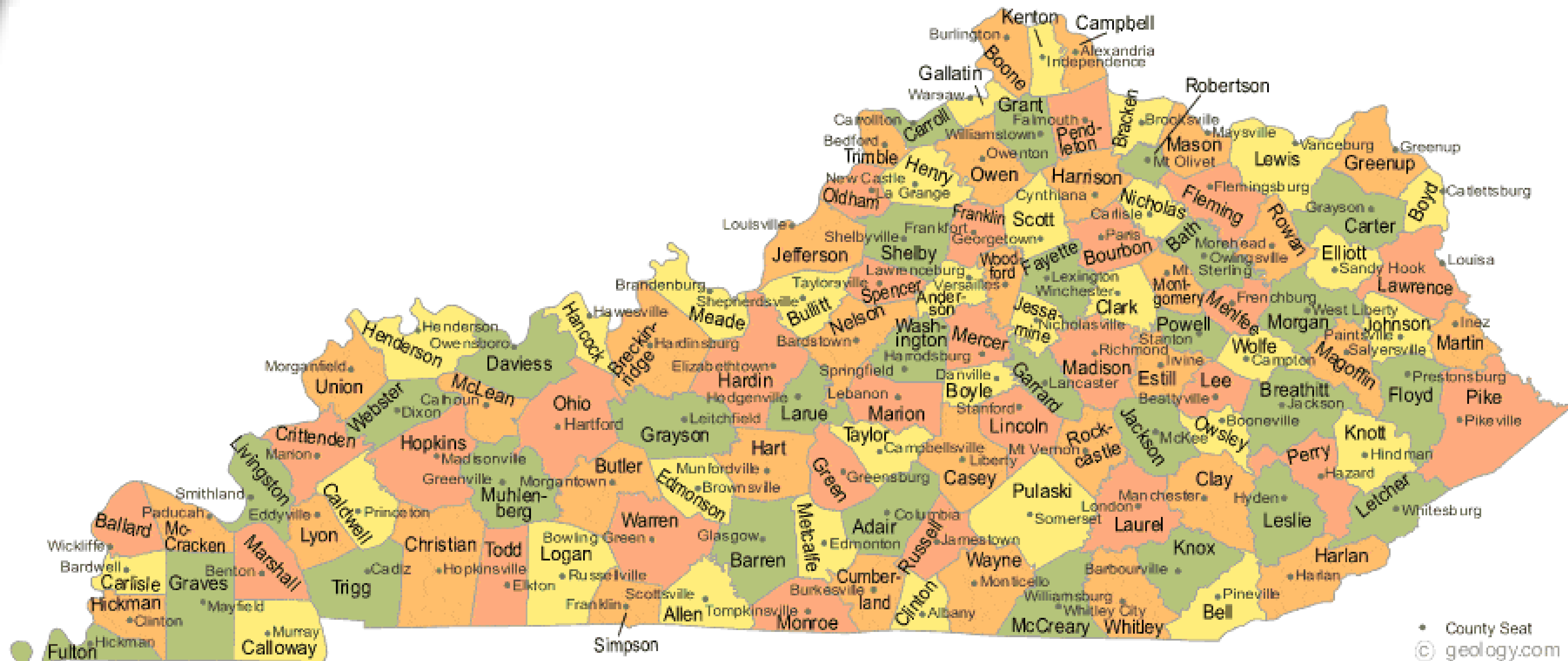
Surgical Oncology



A QUALITY PROGRAM
of the AMERICAN COLLEGE
OF SURGEONS



We Care for Cancer Patients From Every County in Kentucky



Jefferson County – **6588** newly diagnosed cancer patients

All Other Counties – **5048** newly diagnosed cancer patients

Ratio of Established:New Cancer Patients is ~10X

Faces, Memories, Stories of Patients We Lost



Owen McMasters was 11 when he went to the hospital with a sore throat

They thought it was Strep but it turned out he had leukemia instead

Owen endured more than 4 and a half years of treatment, going on the offense both in and outside of the hospital

Owen was 16 years old when he died on February 15, 2016

Faces, Memories, Stories of Patients We Lost



Steven Tompkins, 52, learned he had stage IIIb melanoma in February 2015

Steven graduated from Trinity in 1981 and went on to play baseball and graduate from UofL – he then coached baseball at Trinity for 15 years



He said he was given several options and decided to enroll in the clinical trial that the BCC was developing - his participation gave him five years of life

Steven Tompkins died on September 8, 2020

Faces, Memories, Stories of Patients We Lost



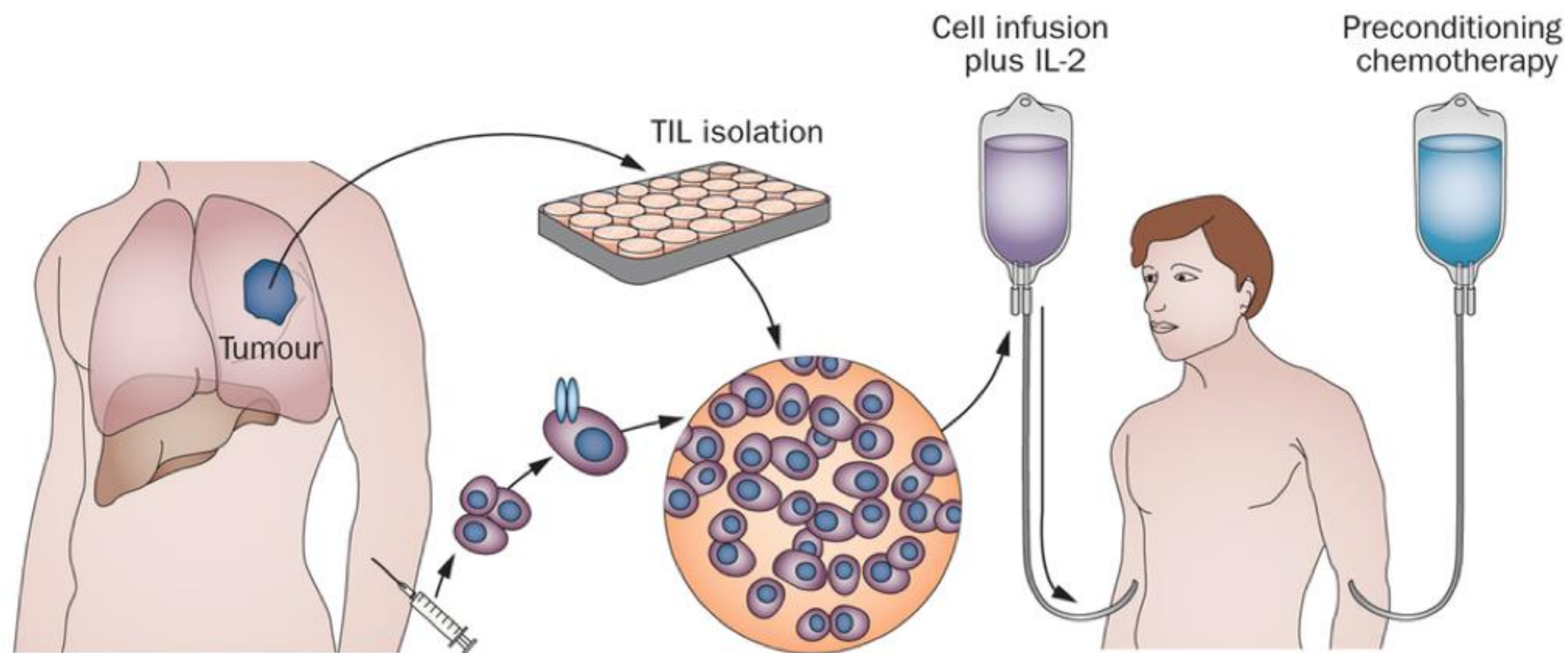
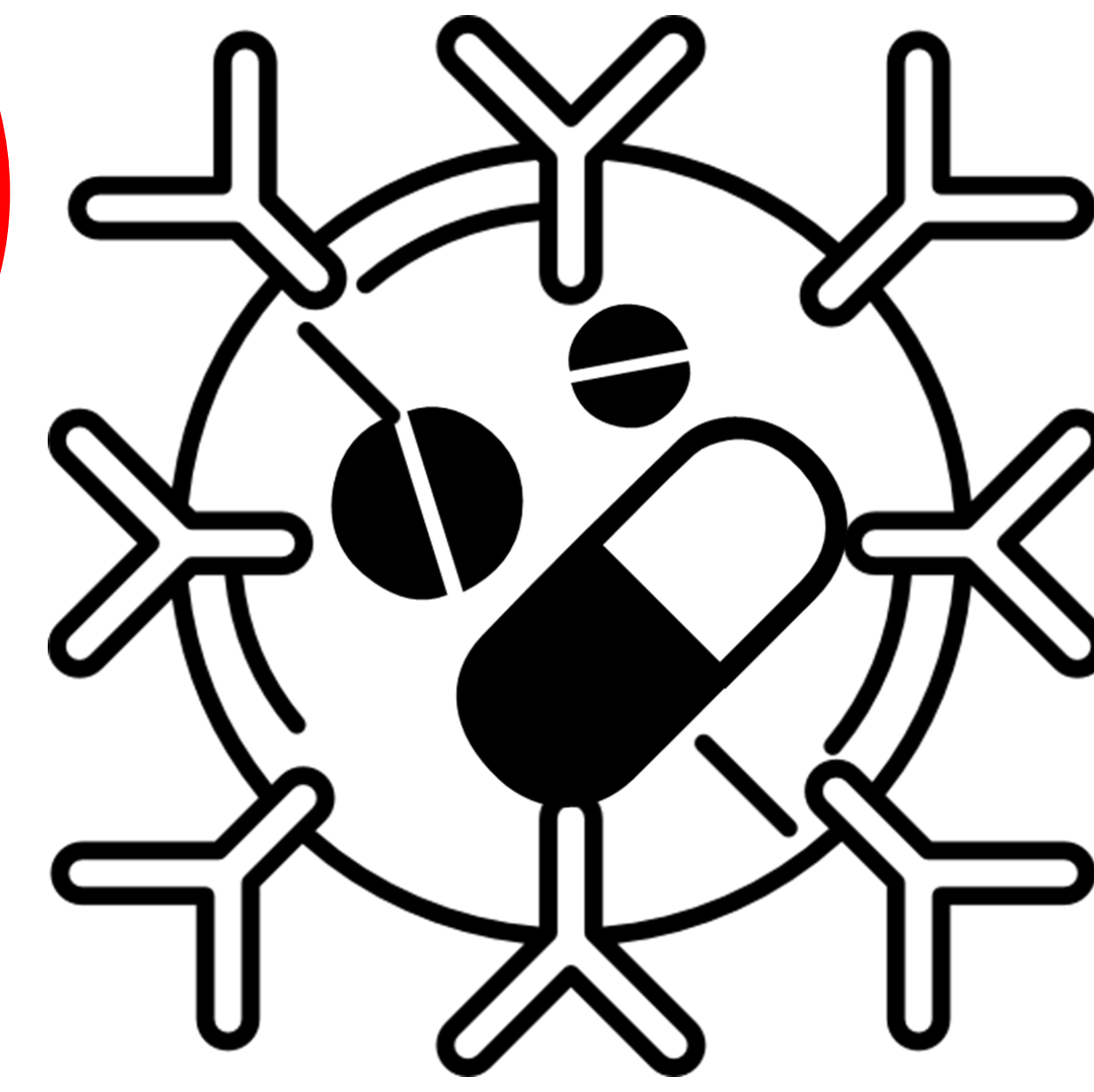
Lara MacGregor was first diagnosed with breast cancer in 2007 at the age of 30, 7 months pregnant with her second son.

She founded Hope Scarves to help patients live through cancer by sharing their scarves and stories

After almost 7 years in remission, Lara was diagnosed with Stage IV Metastatic Breast Cancer in January 2014.

She died January 18, 2022

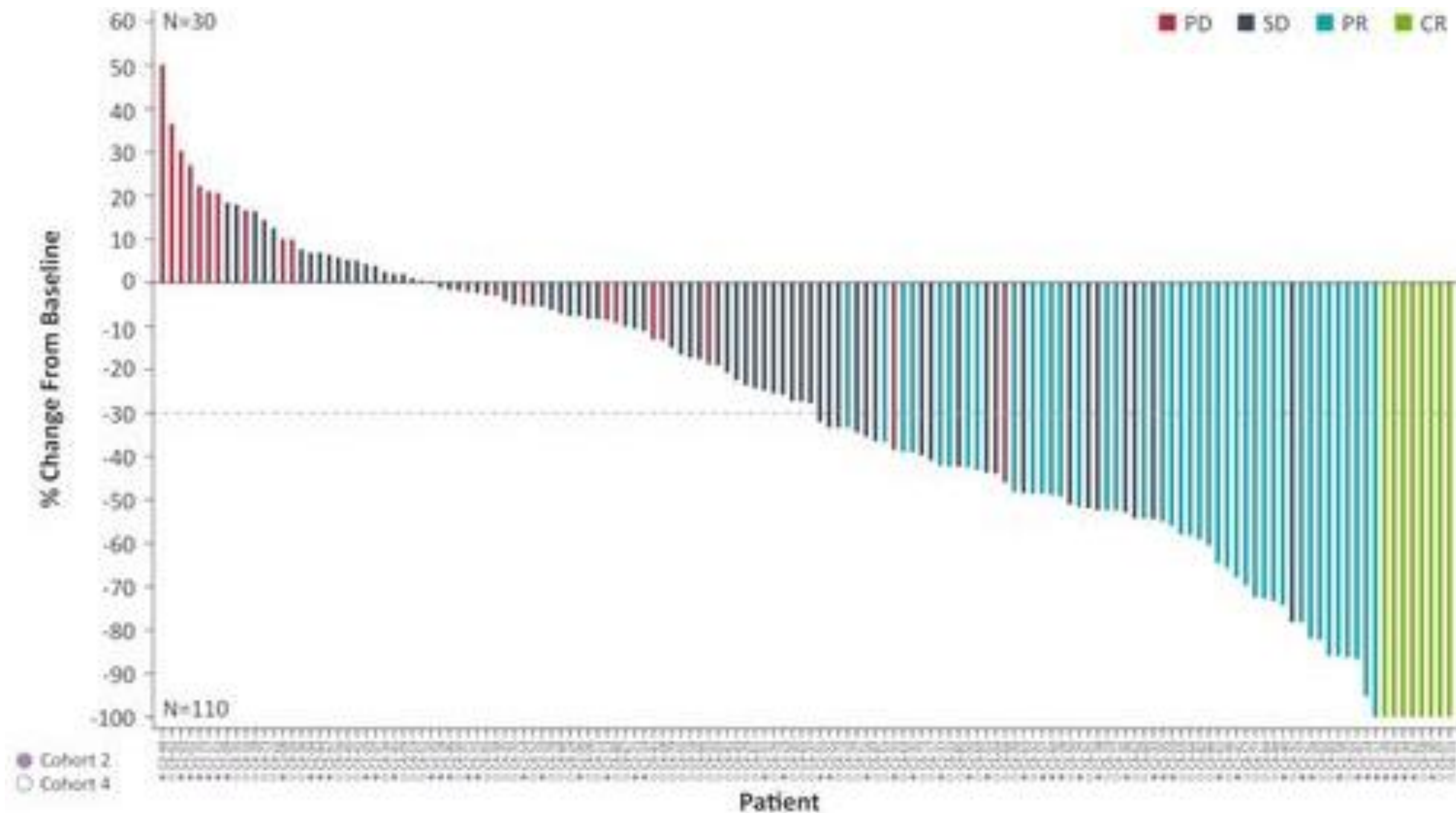
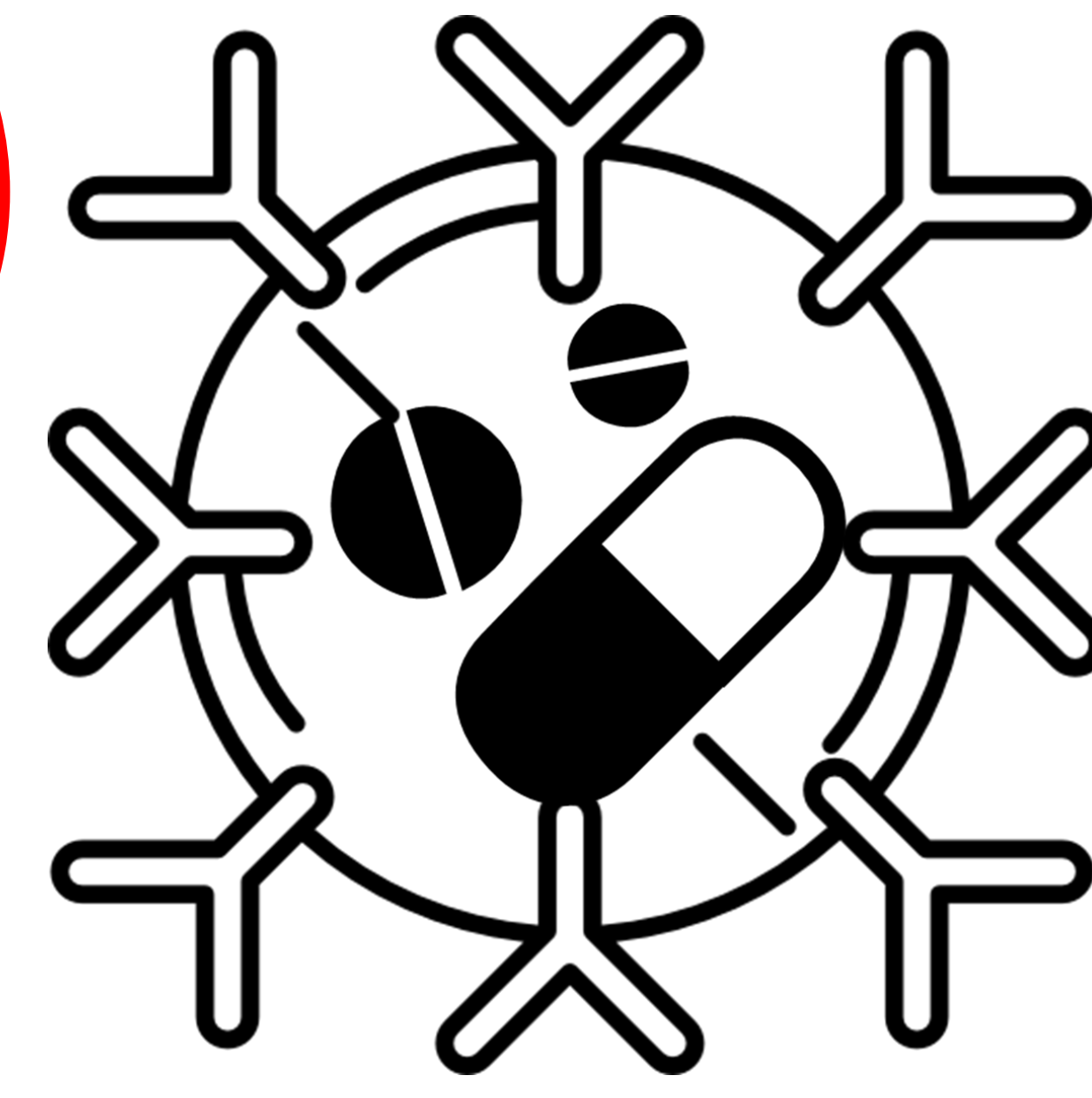
Tumor Infiltrating Lymphocytes (TILs)



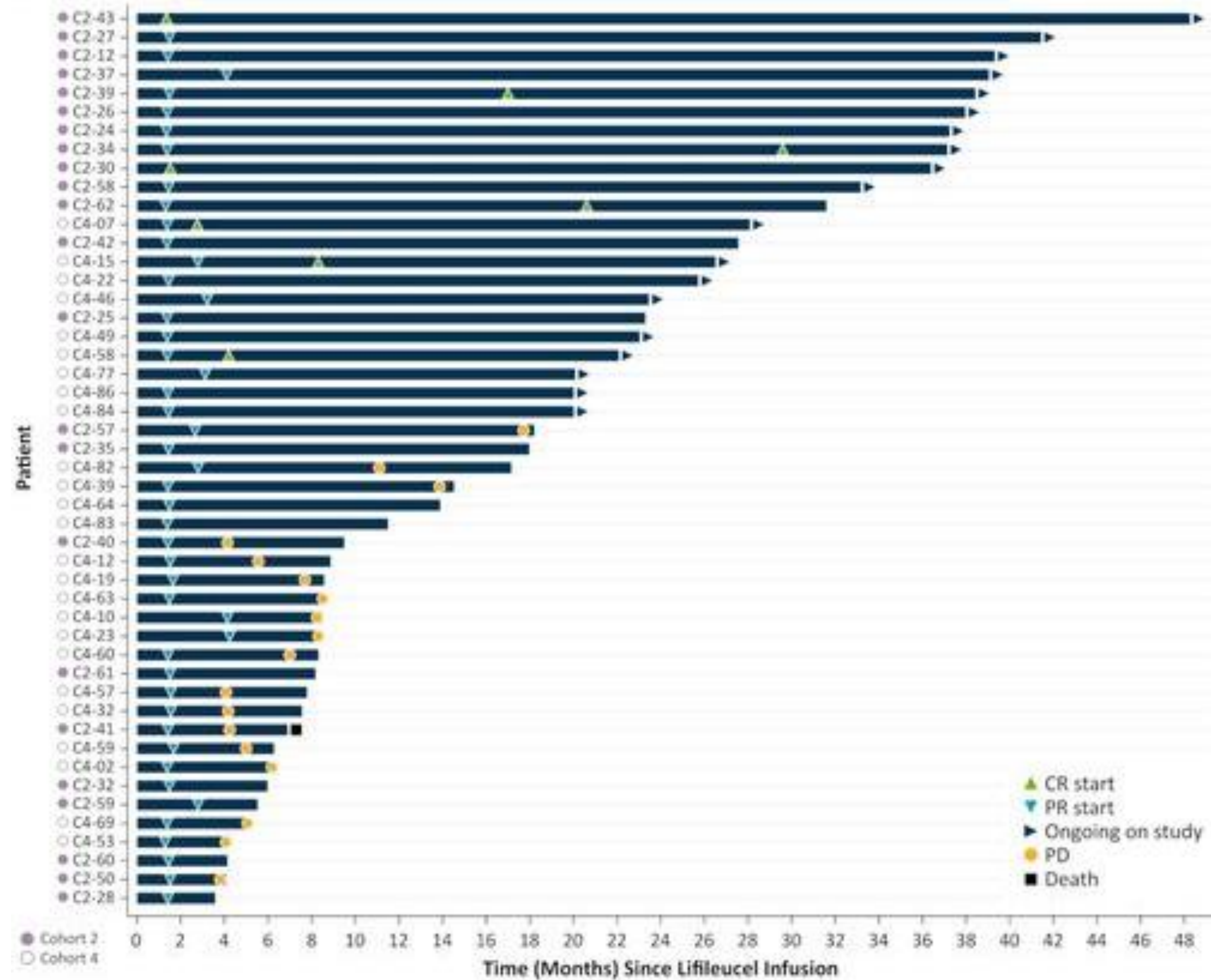
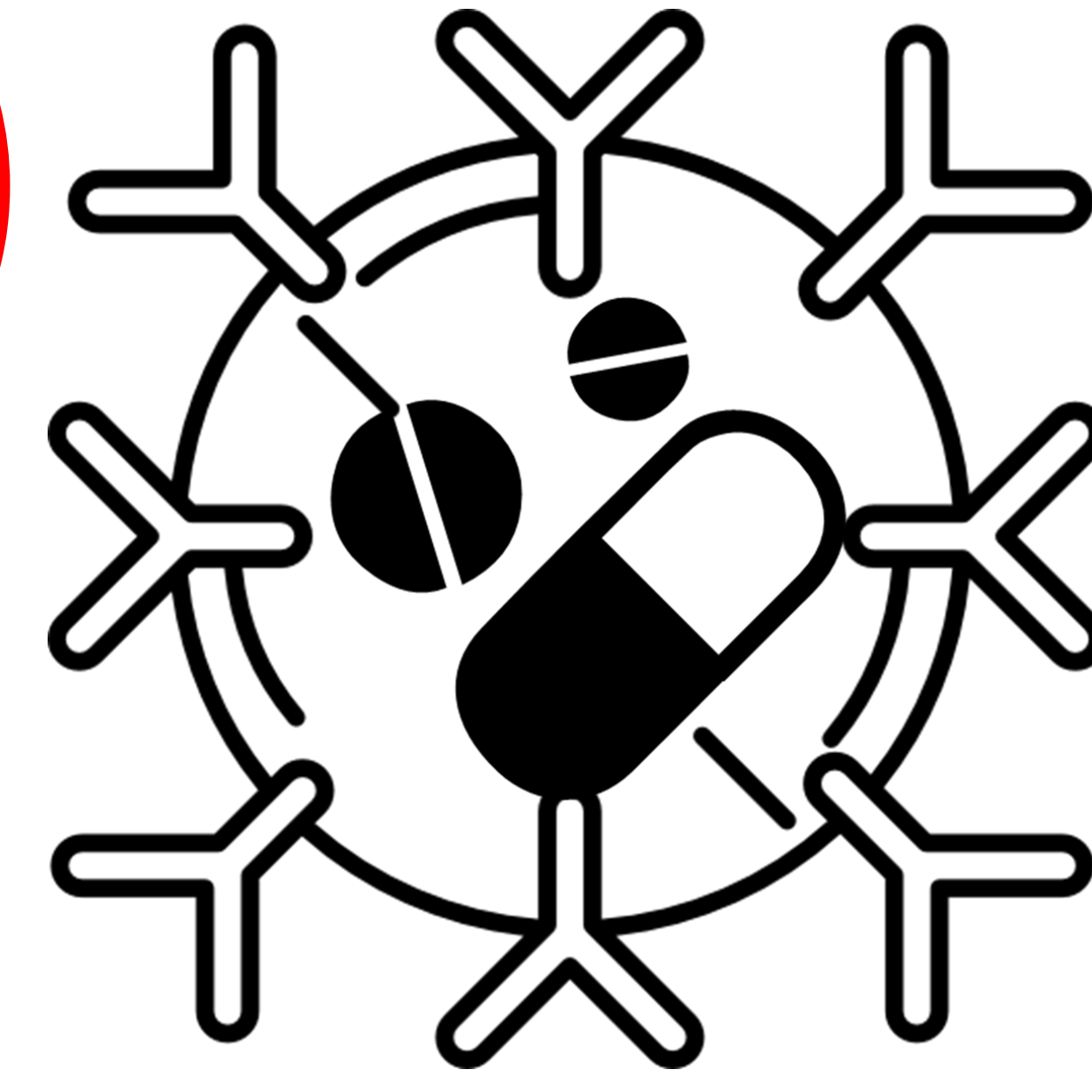
- Surgical oncologists resect patients' tumors and then the tumor-specific immune cells are grown in the lab and infused back into the patient
- This **complex cellular immunotherapy** was only available on the coasts until we opened human trials at UofL Health Brown Cancer Center in 2016
- Once FDA-approved, we will be one of only ten sites in the world certified to offer this life-saving therapy



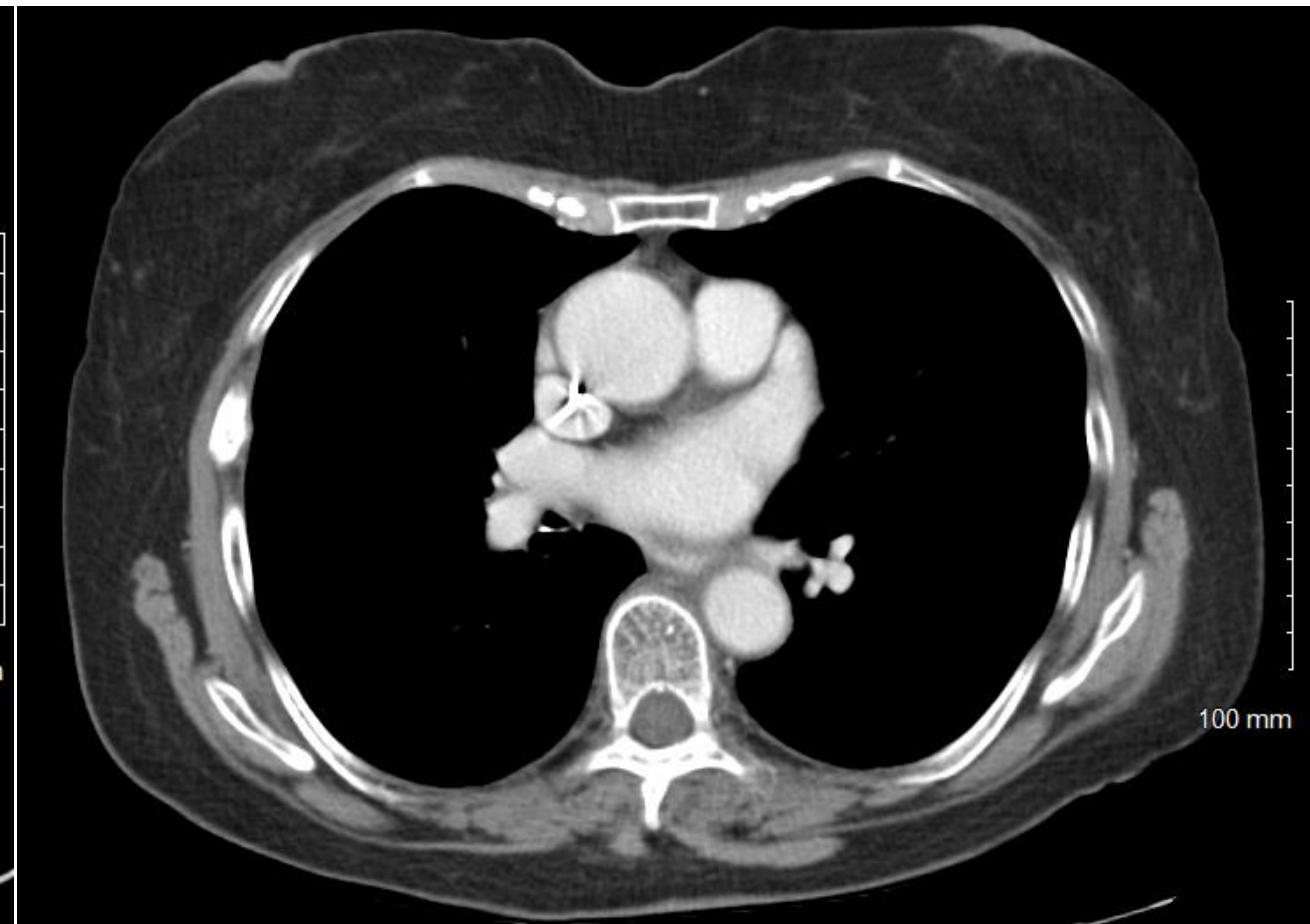
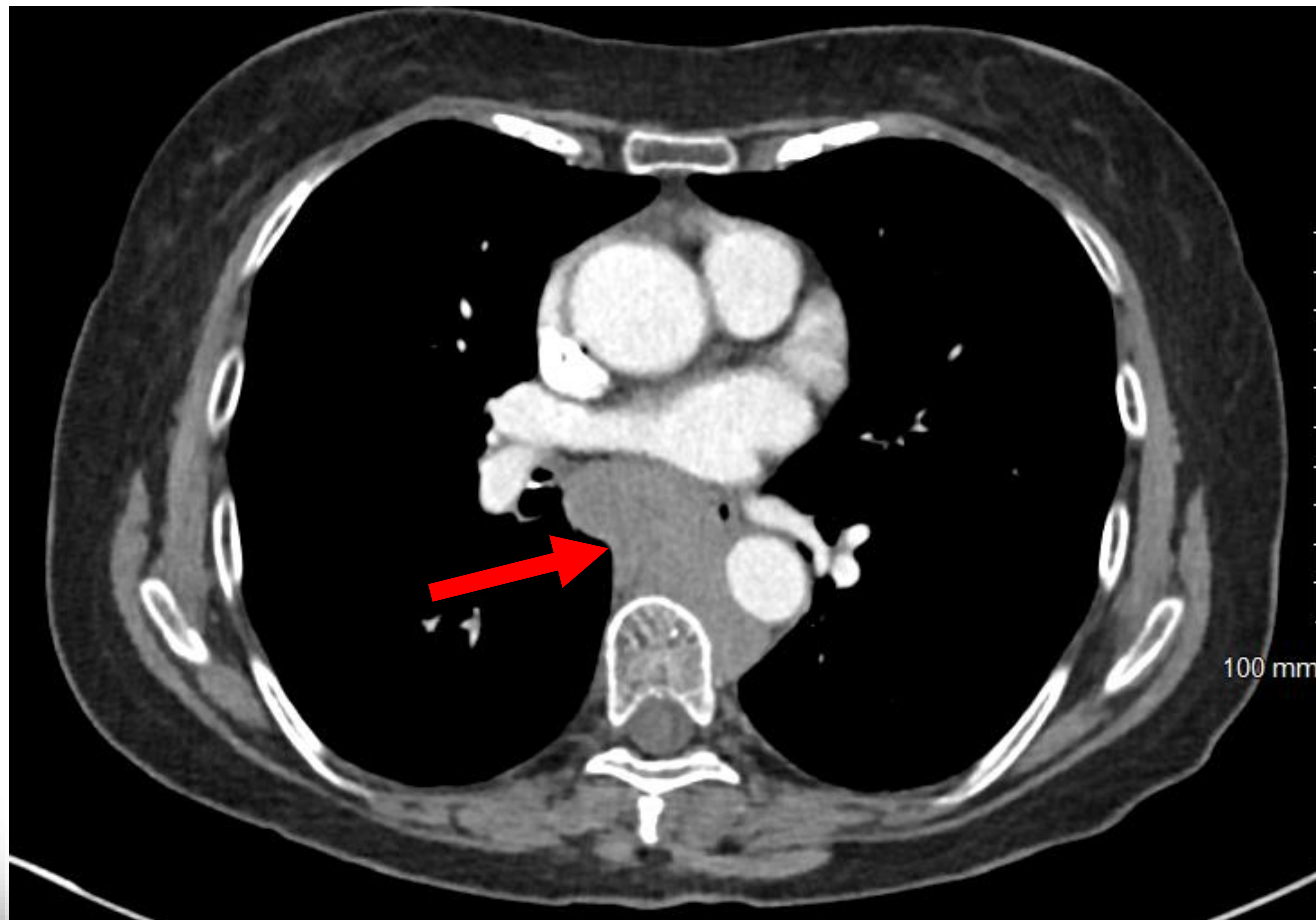
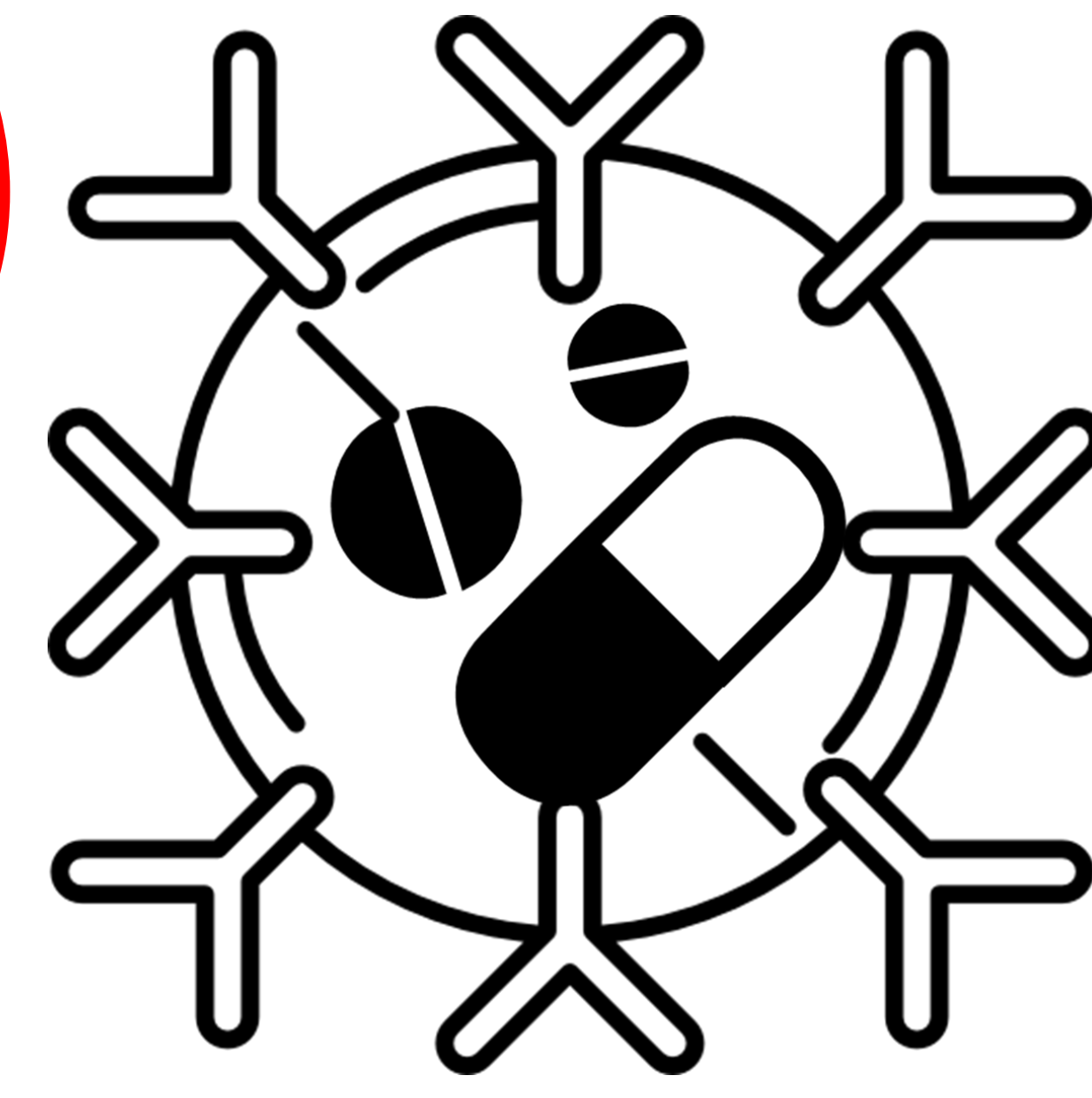
Tumor Infiltrating Lymphocytes (TILs)



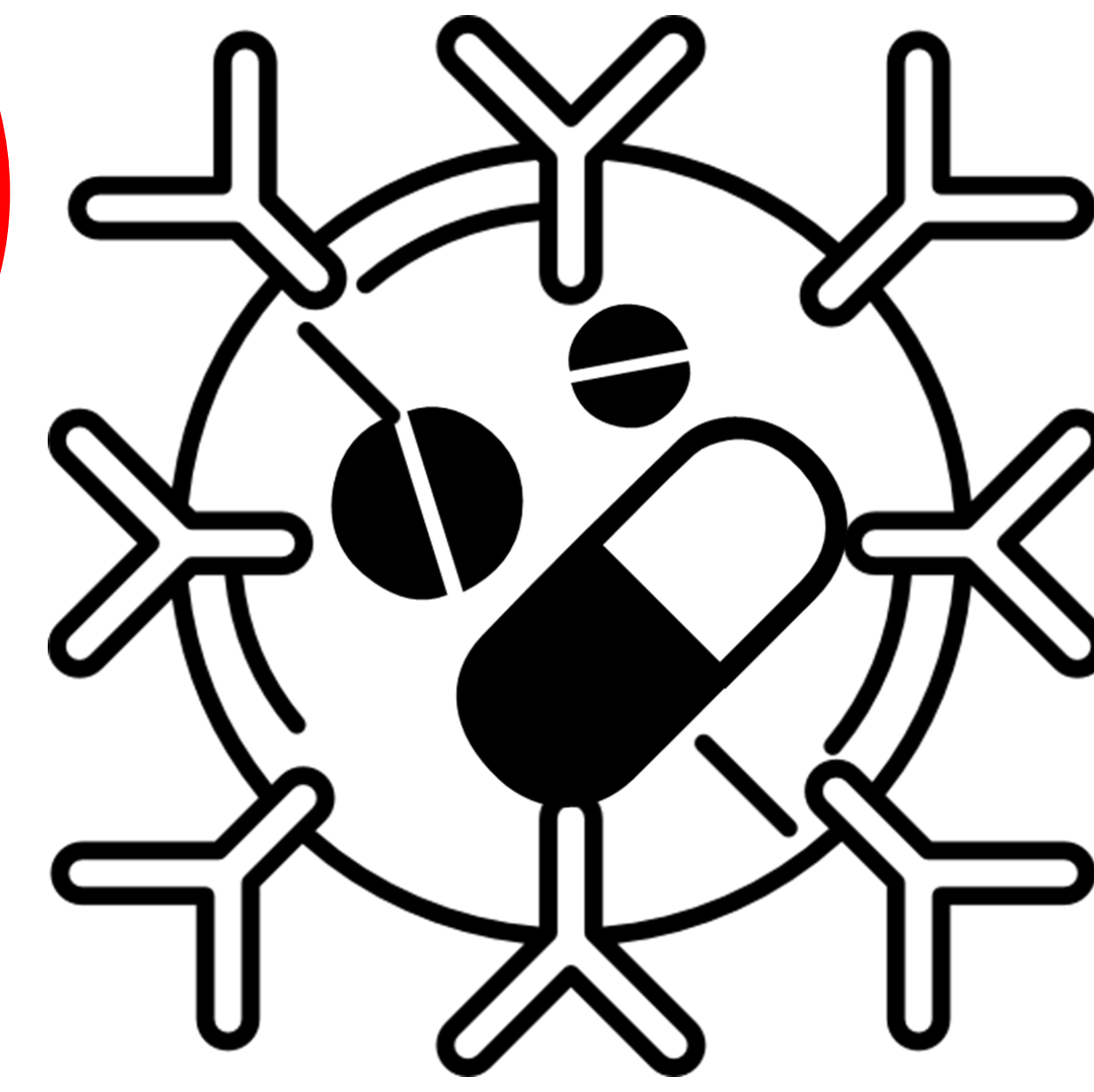
Tumor Infiltrating Lymphocytes (TILs)



Tumor Infiltrating Lymphocytes (TILs)



Tumor Infiltrating Lymphocytes (TILs)



Melanoma

Launching the next generation of cancer-fighting weapons

BY BETTY COFFMAN

When options for treating her cancer seemed to be exhausted and doctors said she did not have long to live, **Valerie Snapp** enrolled in a clinical trial at UofL Health - Brown Cancer Center for an innovative immunotherapy known as TILs. The



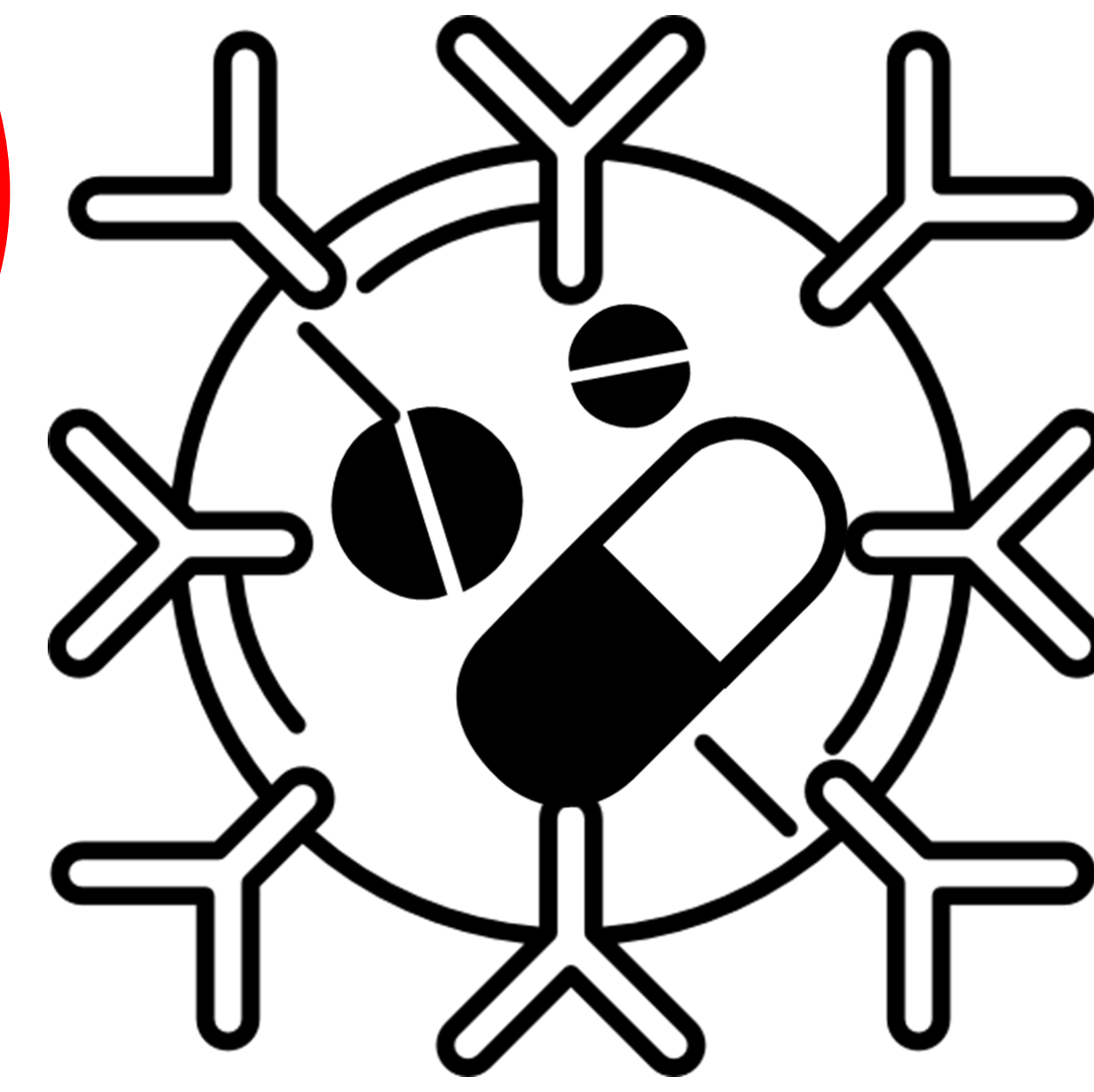
I look out over the farm and it is so beautiful. I think how blessed I am to be able to be here to see this. How many people have been told they wouldn't be here for long and have not had the chance I have had?"

First diagnosed with a rare mucosal melanoma in her sinuses 11 years ago, Nashville resident Valerie Snapp was cancer-free for five years after surgery and radiation. But the cancer came back. An immunotherapy drug worked

"He told me all the pros and cons and I said, 'I'll tell you right now I want in,'" Snapp said. Now, more than a year after her treatment, scans show she is cancer-free.

of immunotherapy in lung ca Michael Egger, assistant pro The doctors at UofL have not only can be effective wh

Tumor Infiltrating Lymphocytes (TILs)



Cervical Cancer

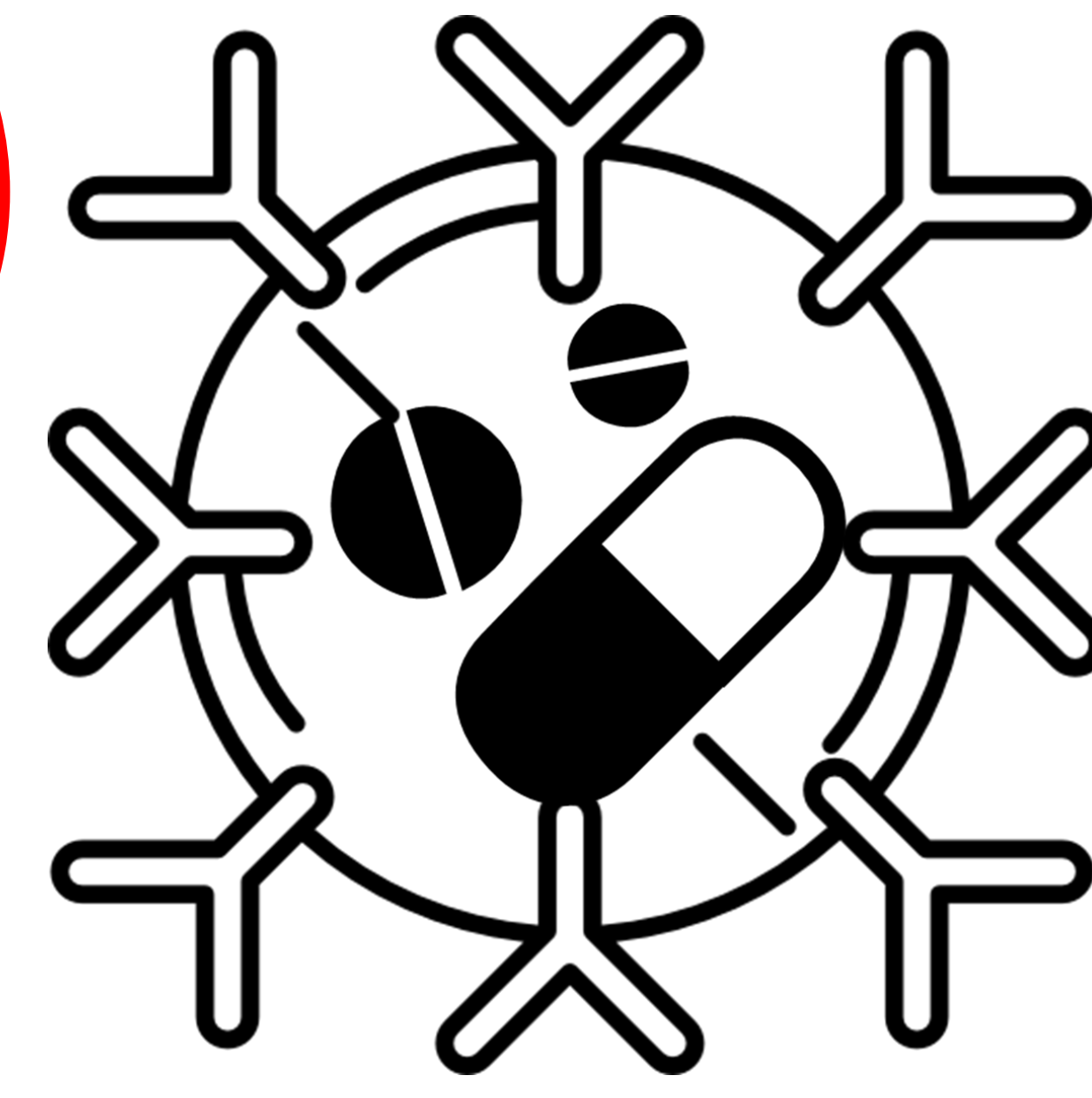
HEALTH

Clinical trial in Louisville providing hope for cancer patients

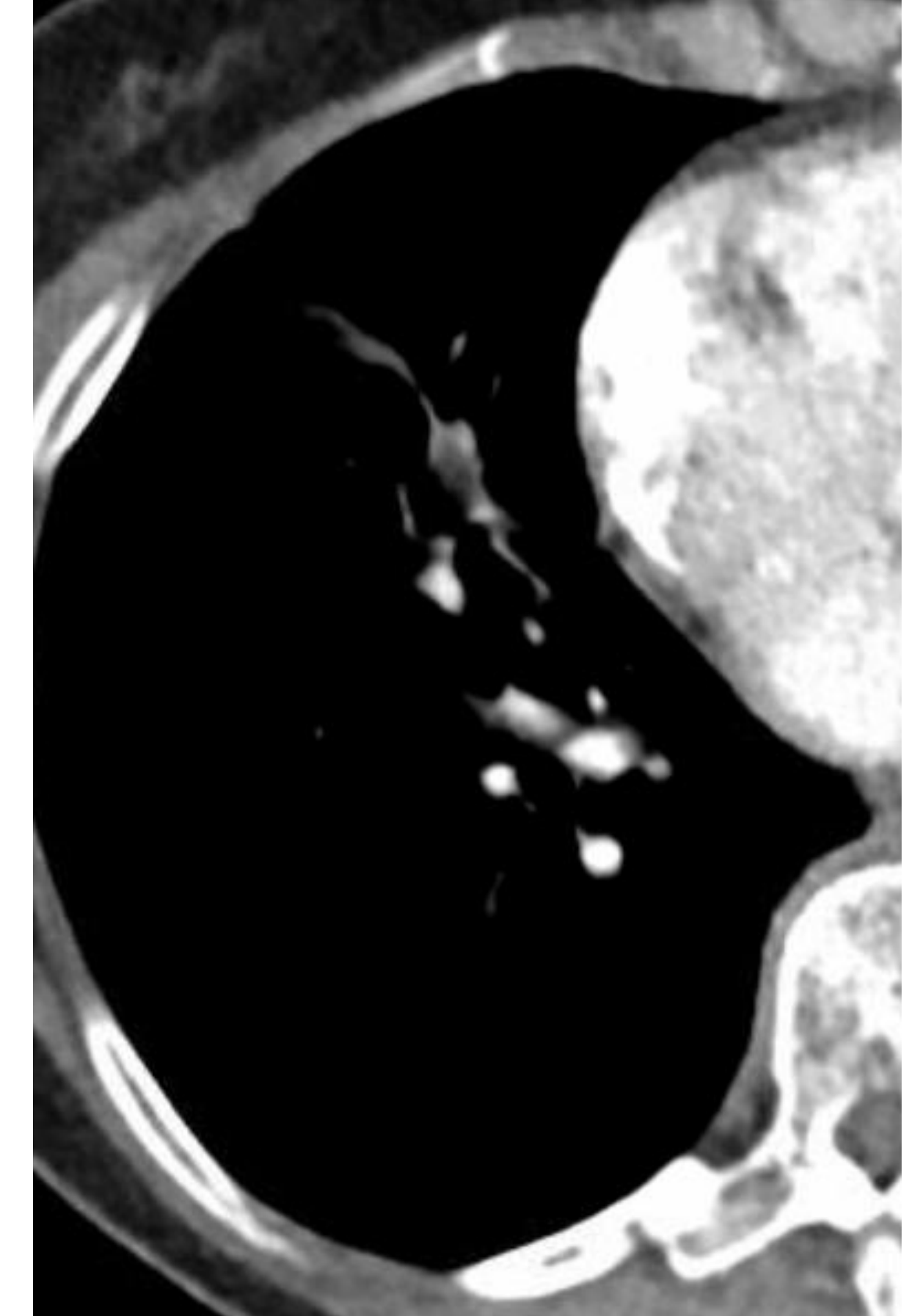
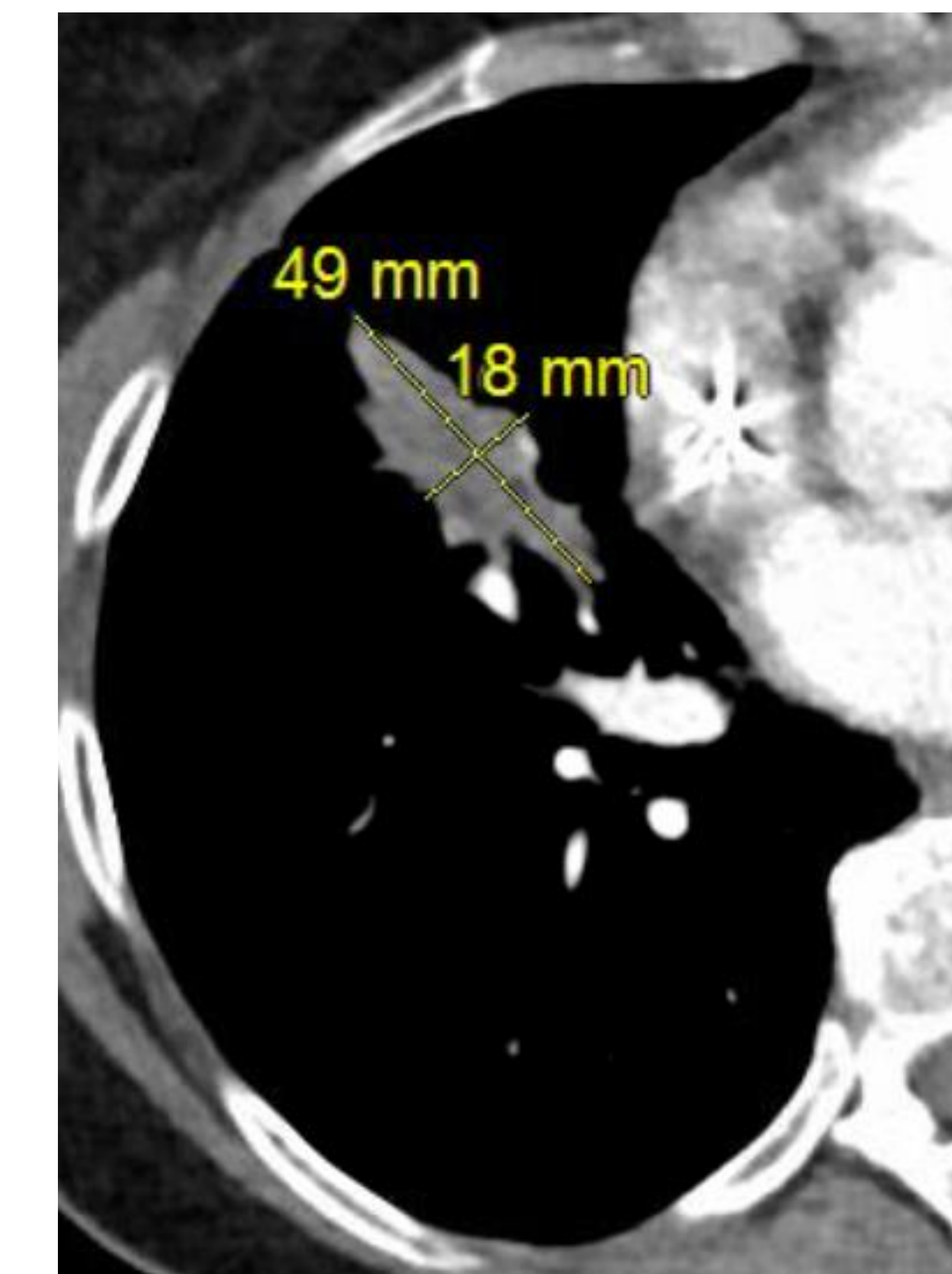
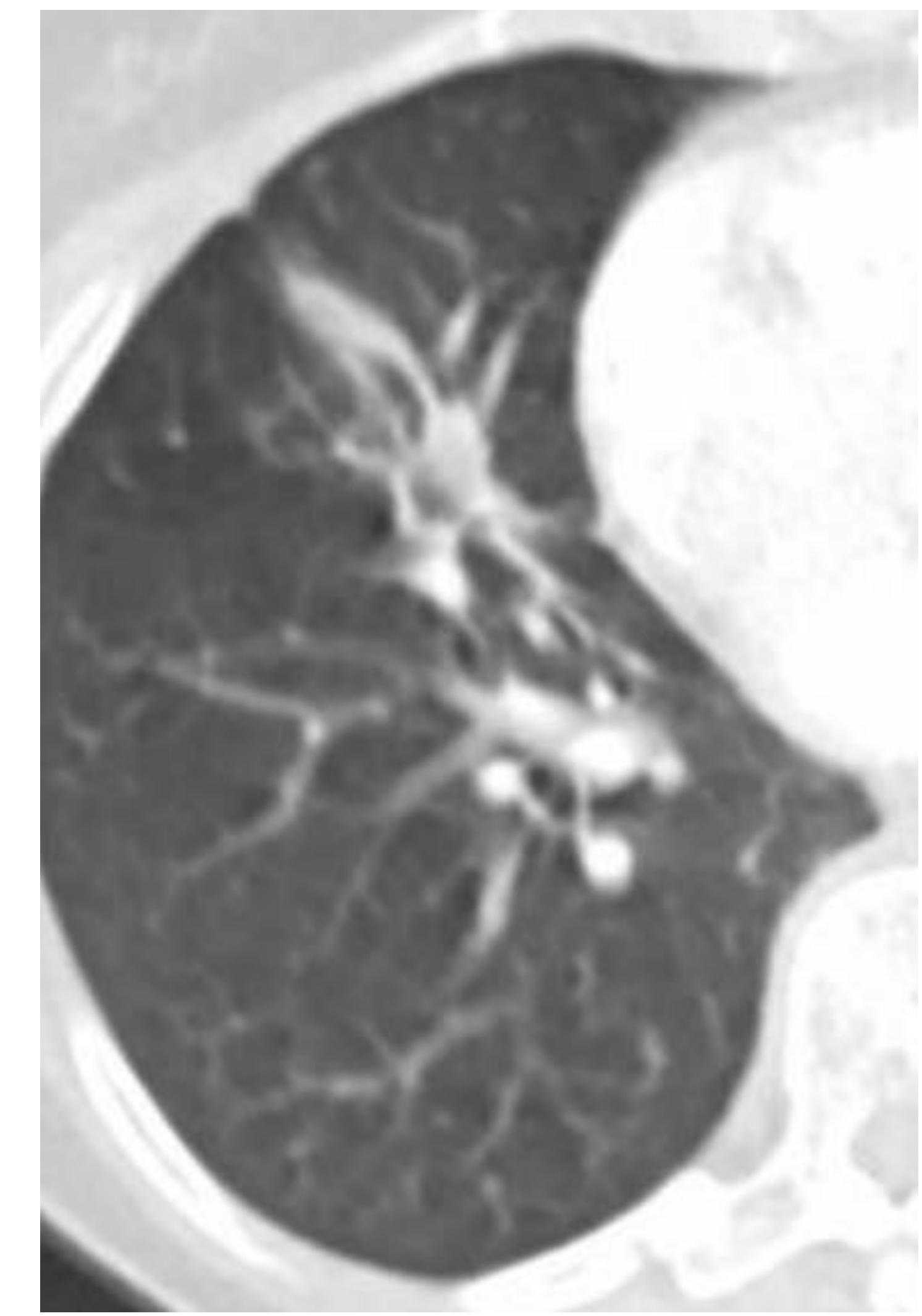
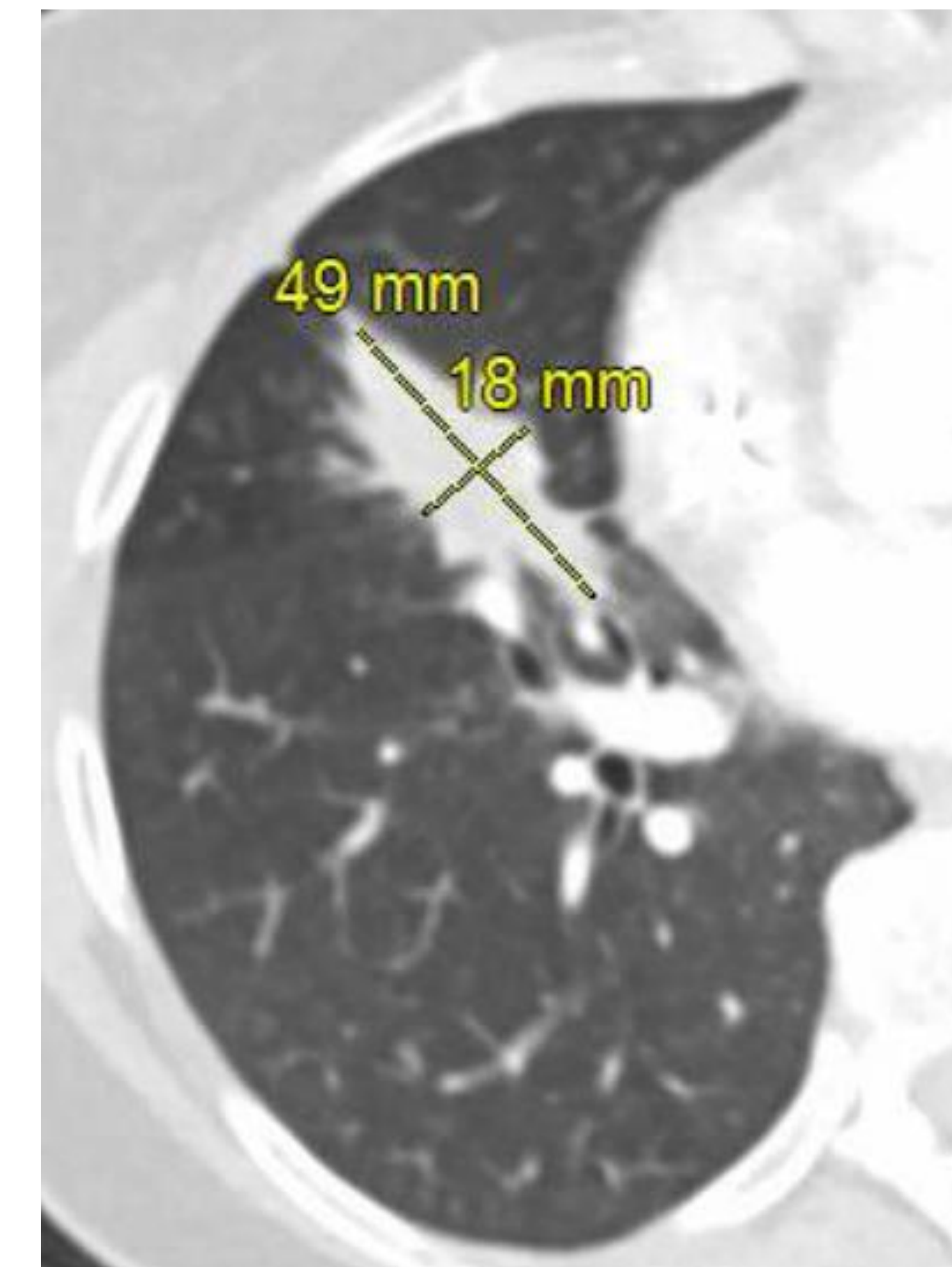
The Brown Cancer Center in Louisville is one of seven states across the country conducting trials for a breakthrough cancer treatment.



Tumor Infiltrating Lymphocytes (TILs)



Lung Cancer

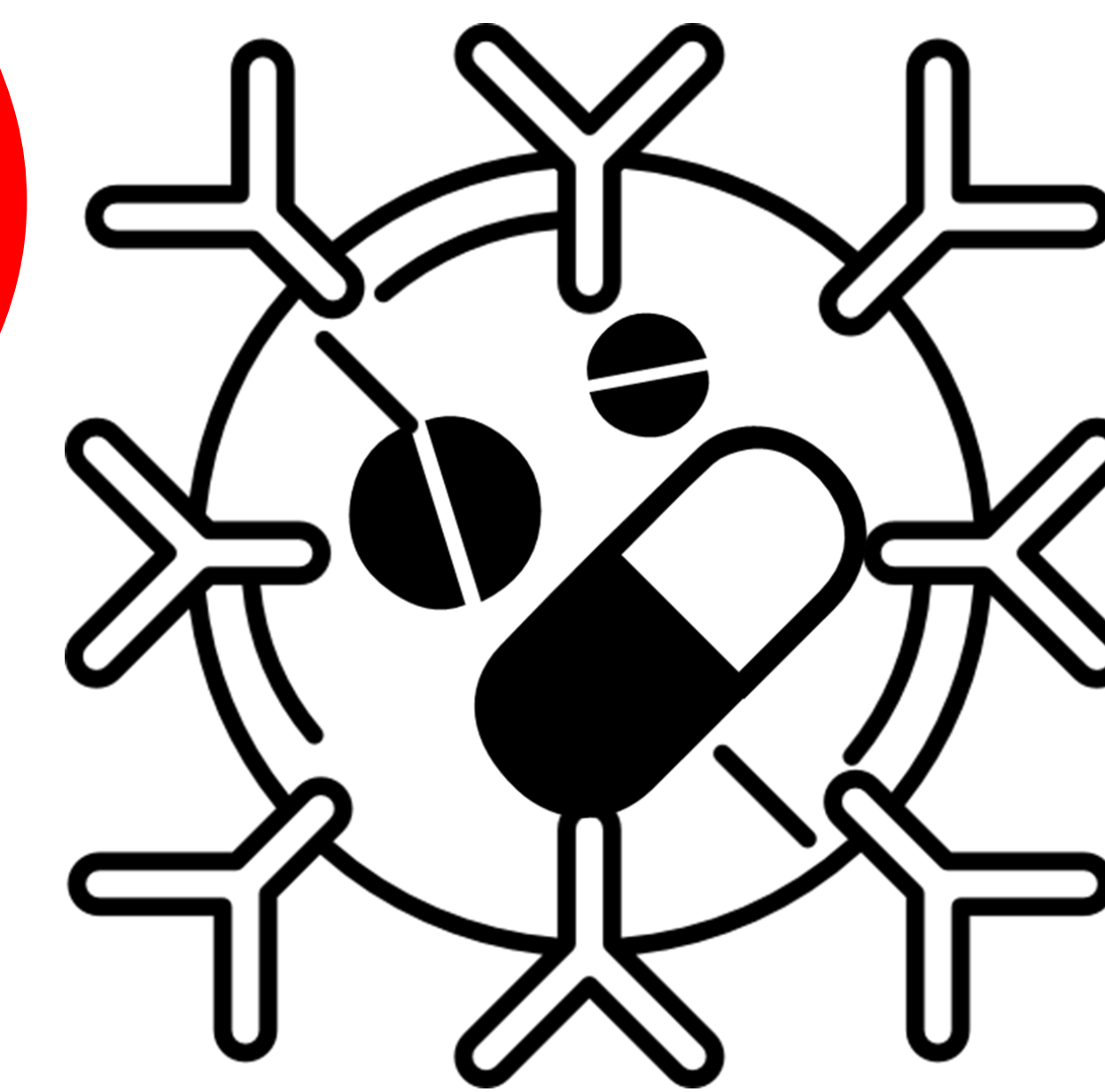


June 2021

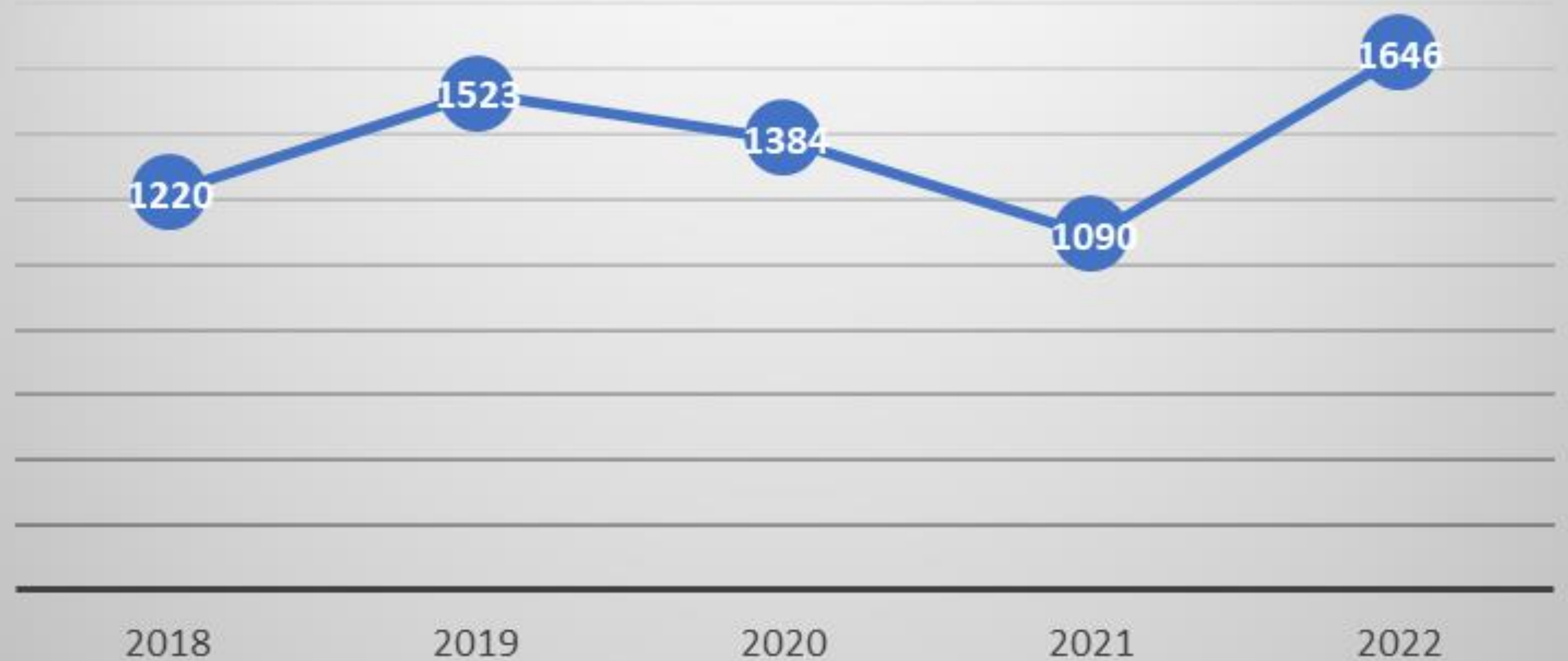
Nov 2021



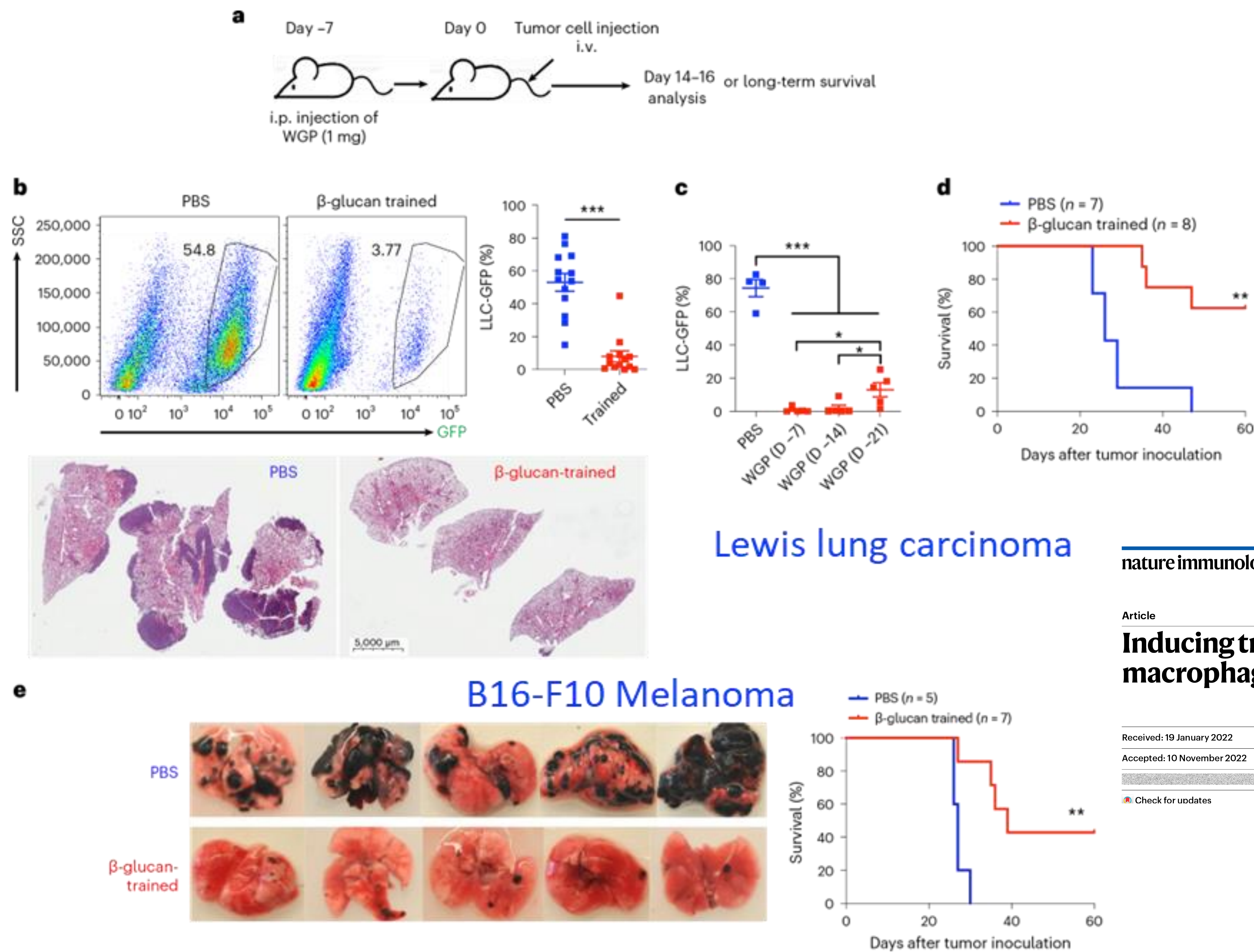
Tumor Infiltrating Lymphocytes (TILs)



Low Dose Chest CT Lung Cancer Screenings



Today's Laboratory Research Means A Future Without Cancer



Lewis lung carcinoma

B16-F10 Melanoma

- Induction of trained immunity by natural compound beta-glucan inhibits tumor metastasis from melanoma and breast cancer
- Beta-glucan treatment prolongs overall survival
- Beta-glucan-trained innate cells can be used as an adoptive cell therapy

nature immunology

Article

<https://doi.org/10.1038/s41590-022-01388-8>

Inducing trained immunity in pro-metastatic macrophages to control tumor metastasis

Received: 19 January 2022

Accepted: 10 November 2022

Check for updates

Chuanlin Ding^{1†}, Rejeena Shrestha^{2†}, Xiaojuan Zhu¹, Anne E. Geller², Souzhen Wu¹, Matthew R. Woeste^{1,2}, Wenqian Li³, Haomin Wang⁴, Fang Yuan⁵, Raobo Xu⁶, Julia H. Chariker⁶, Xiaoling Hu⁷, Hong Li⁷, David Tieri⁸, Huang-Ge Zhang⁹, Eric C. Rouchka⁹, Robert Mitchell⁹, Leah J. Siskind¹⁰, Xiang Zhang¹, Xiaoji G. Xu¹, Kelly M. McMasters¹, Yan Yu² & Jun Yan^{1,2}✉

Today's Laboratory Research Means A **Future Without Cancer**

Spatial Proteomics to show where immune cells are located in the lungs

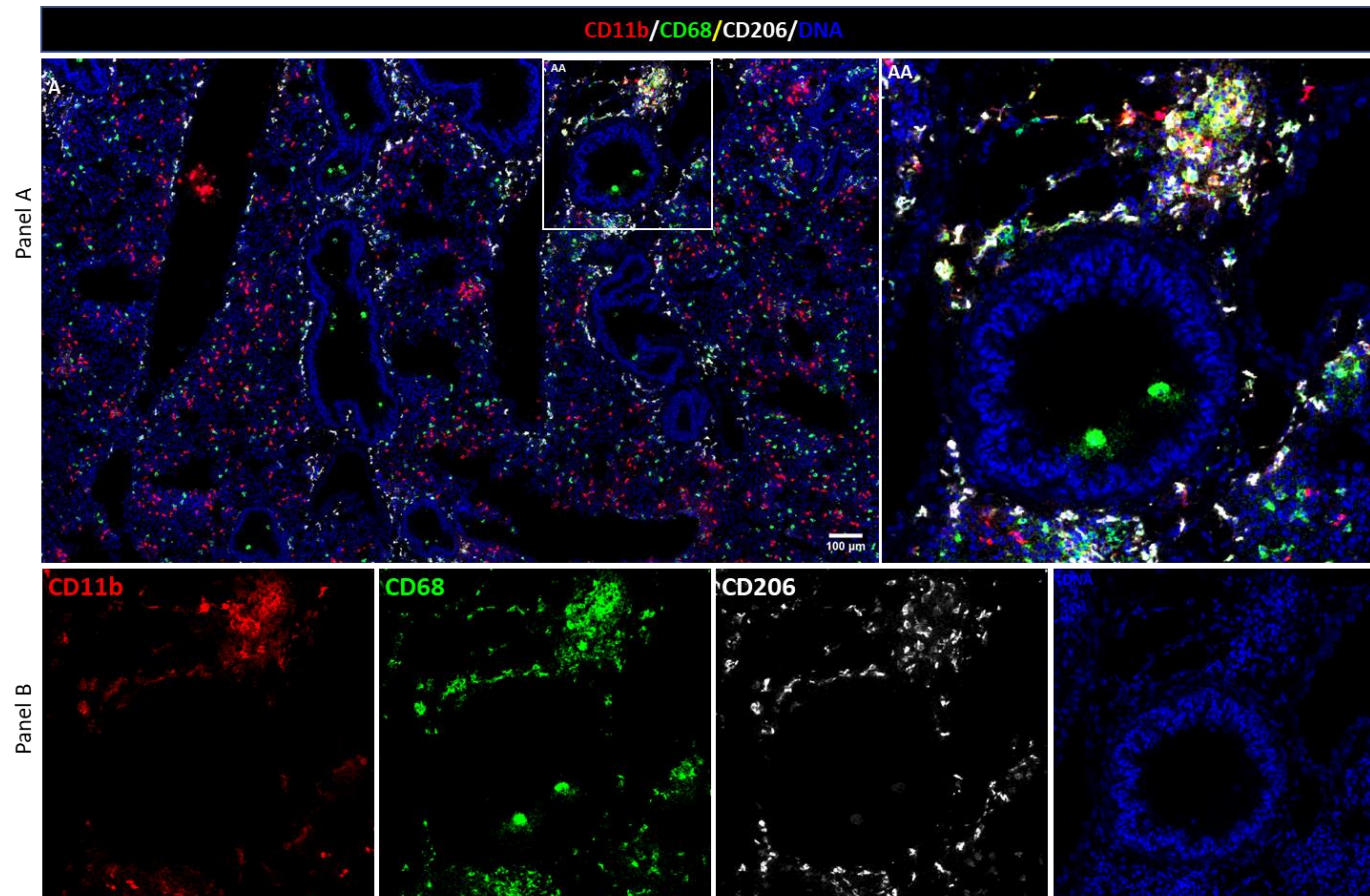


Figure: Mouse lung FF section stained with metal-conjugated antibodies. Data was visualized by Fluidigm MCD Viewer. **A.** ROI area 2500 X 1500 µM. **AA.** Magnification from panel **A.** with 500 X 500 µM. **Panel B.** Single channel for cropped AA.

Hyperion Imaging
Mass Cytometry

Educating the Next Generation of Cancer MDs and Researchers

- 8 Graduate Students**
- 17 Post-Doctoral Fellows**
- 9 Medical Oncology Fellows**
- 4 Surgical Oncology Fellows**
- 7 Radiation Oncology Residents**



Imbert



Klarer



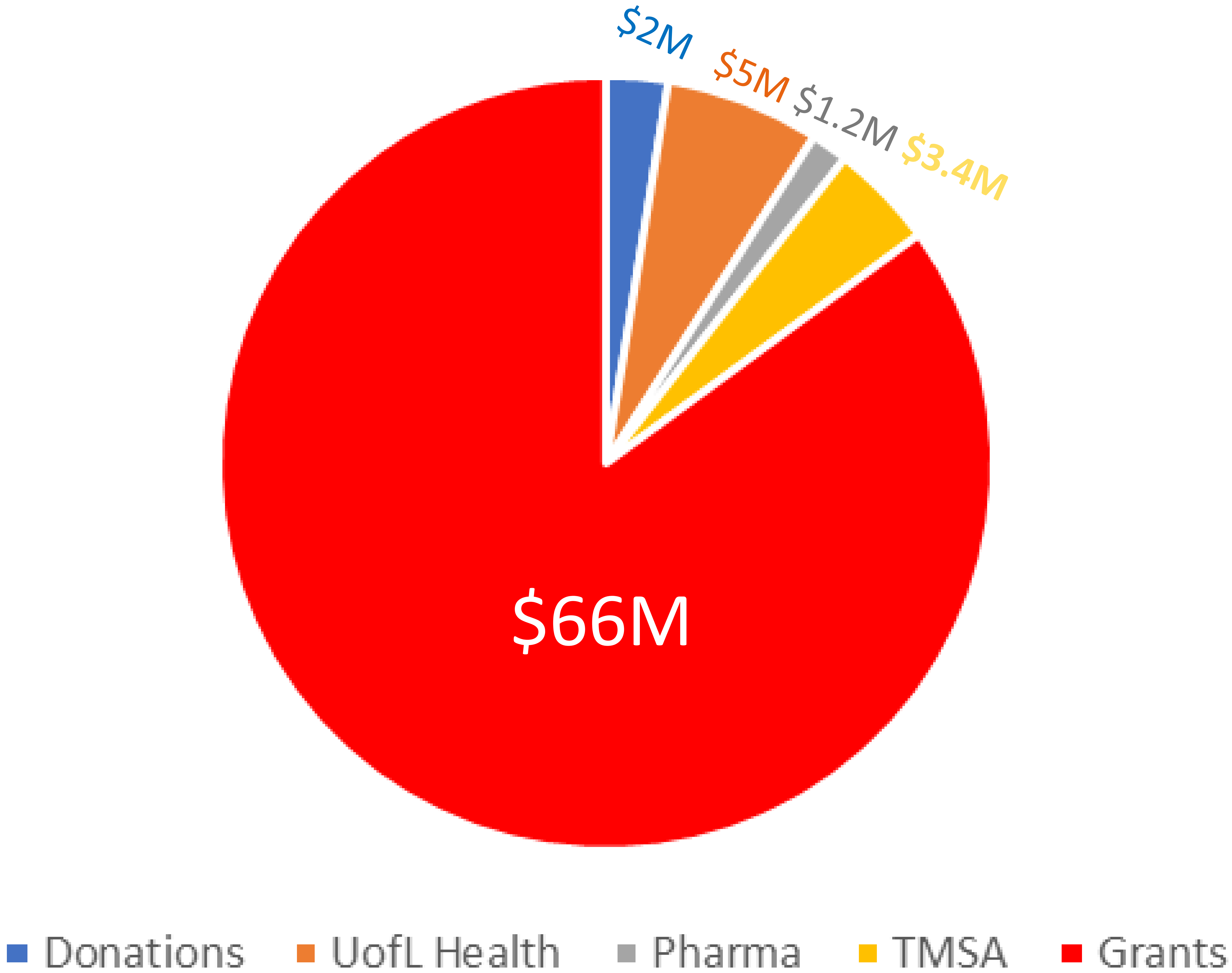
Egger



Ngo

KY's Return On Investment (ROI) for Cancer Research at the UofL Is 20-Fold

Research Revenue - BCC



\$3.4M in Annual TMSA Funds Are Saving Lives

- Multi-disciplinary cancer subspecialty care programs
- Innovative laboratory research and clinical trials
- Cancer screening for early detection
- Educating the next generation of cancer doctors and researchers in KY