

The background of the slide features a teal gradient with several hot air balloons. One large, multi-colored striped balloon is prominent in the upper center. To its right, another striped balloon is visible. On the far right, a third balloon with horizontal stripes of black, yellow, red, and grey is shown. In the bottom left corner, there are smaller, fainter images of hot air balloons.

The Legacy Program

Immunology research
through tissue donation

Tao Yue, PhD

Kidney Cancer Program

Center for the Genetics of Host Defense

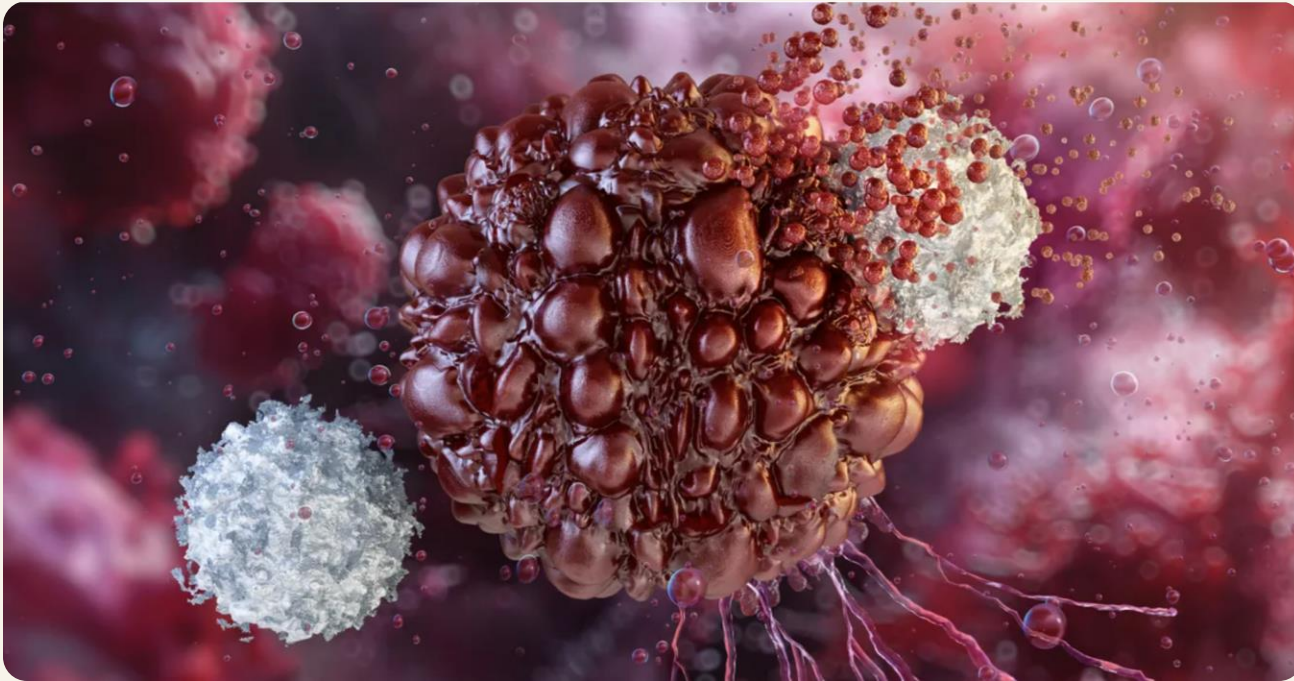
Department of Immunology

UT Southwestern Medical Center

SEPTEMBER 20, 2026

The tumor's immune neighborhood

The image shows immune cells interacting with cancer cells



Kidney cancer cells

Grow and try to avoid the immune system

Immune cells

Can recognize and attack cancer

Supporting cells and blood vessels

Shape the environment around the tumor

Immunotherapy can strengthen the immune response

Why donated tissue matters

Treatment affects different tumors in different ways

Scans show where tumors grow or shrink,
but they cannot explain why

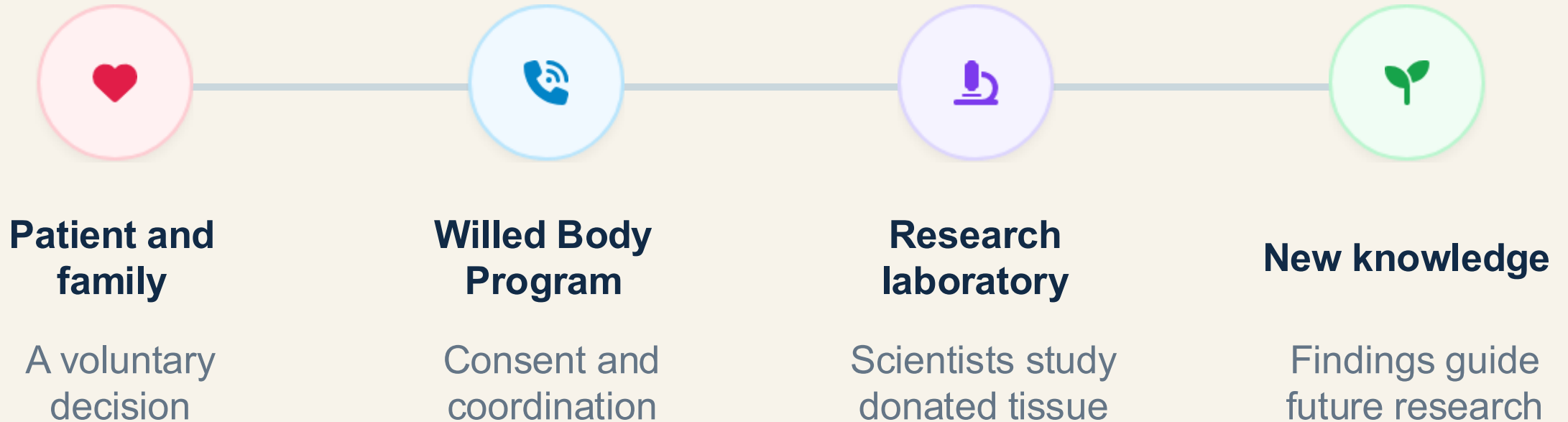
Some tumors never respond. Others
respond at first and later become
resistant.

Donated tissue lets us study
what happened inside the
tumor and its surrounding
immune cells



A tissue donation's journey

Planning starts before the donation



Every donation follows an approved plan with consent, privacy protections, and respect for the donor

The Willed Body Program

What patients and families can expect

Immediate notification after death

Call the 24-hour line right away. Collection ideally begins within 6–8 hours.

No cost to patients or families

No transportation or other fees.

Medical education and research

Afterwards body may be used to train medical students.

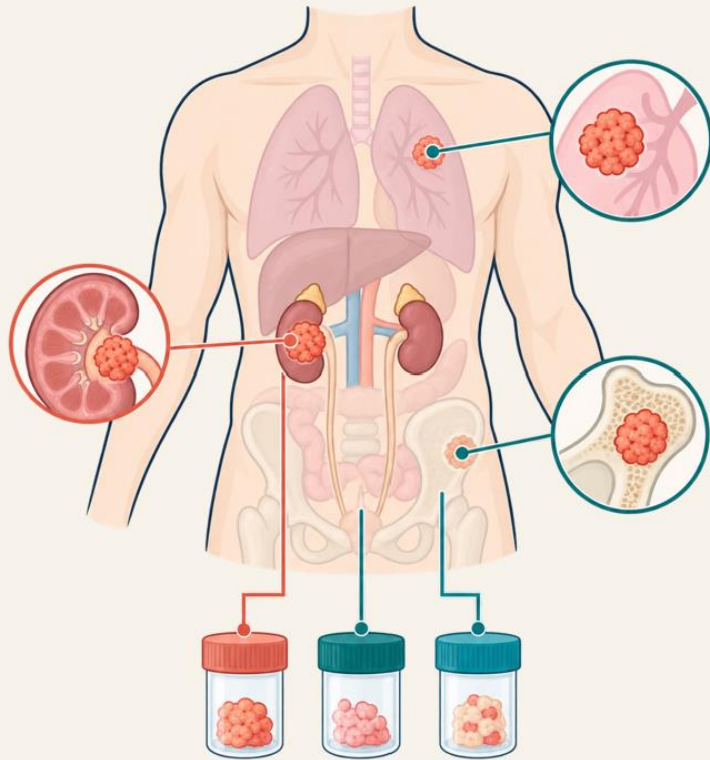
Cremation and remains

After studies, families may receive cremated remains or choose the Memorial Garden.



What whole-body donation makes possible

One donor can show how cancer and immunity differ across the body



Original kidney tumor

Shows where the cancer began

Tumors in other organs

Shows how cancer changed as it spread

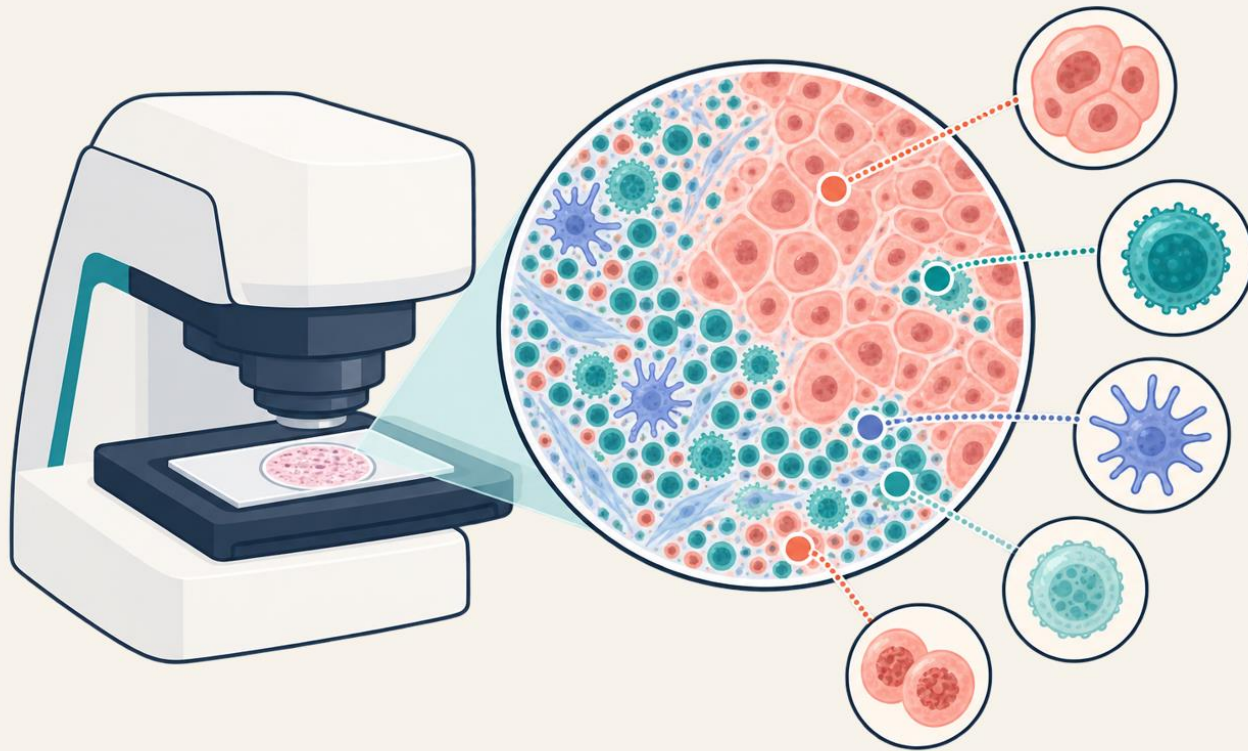
Blood and immune tissues

Shows how the body's defenses responded

**3 kidney cancer patients in the past year made a contribution to
UT Southwestern's Willed Body Program**

Mapping the tumor's immune neighborhood

Immunophenotyping identifies the cells in each tissue sample



Immunophenotyping means identifying the cells in a tissue and what they appear to be doing

Which immune cells are present?

Where are they located?

How do they differ across tumor sites or after treatment?

The map helps us study treatment response and resistance

Following donated tumor tissue over time

Patient-derived avatars extend what we can learn from a tissue sample

Patient-derived Avatars

Researchers place a small piece of donated tumor into a mouse under scientific and animal-care oversight

Treatment response

Observe changes over a period of time

Resistance

Study why a tumor stops responding

Drug discovery

Test research ideas before clinical studies



Knowledge carried forward

Every donation gives researchers an opportunity to answer questions that could not otherwise be studied

With deep gratitude, thank you

