

The Role of the Pathologist

What happens with your tissue? What are TILs?

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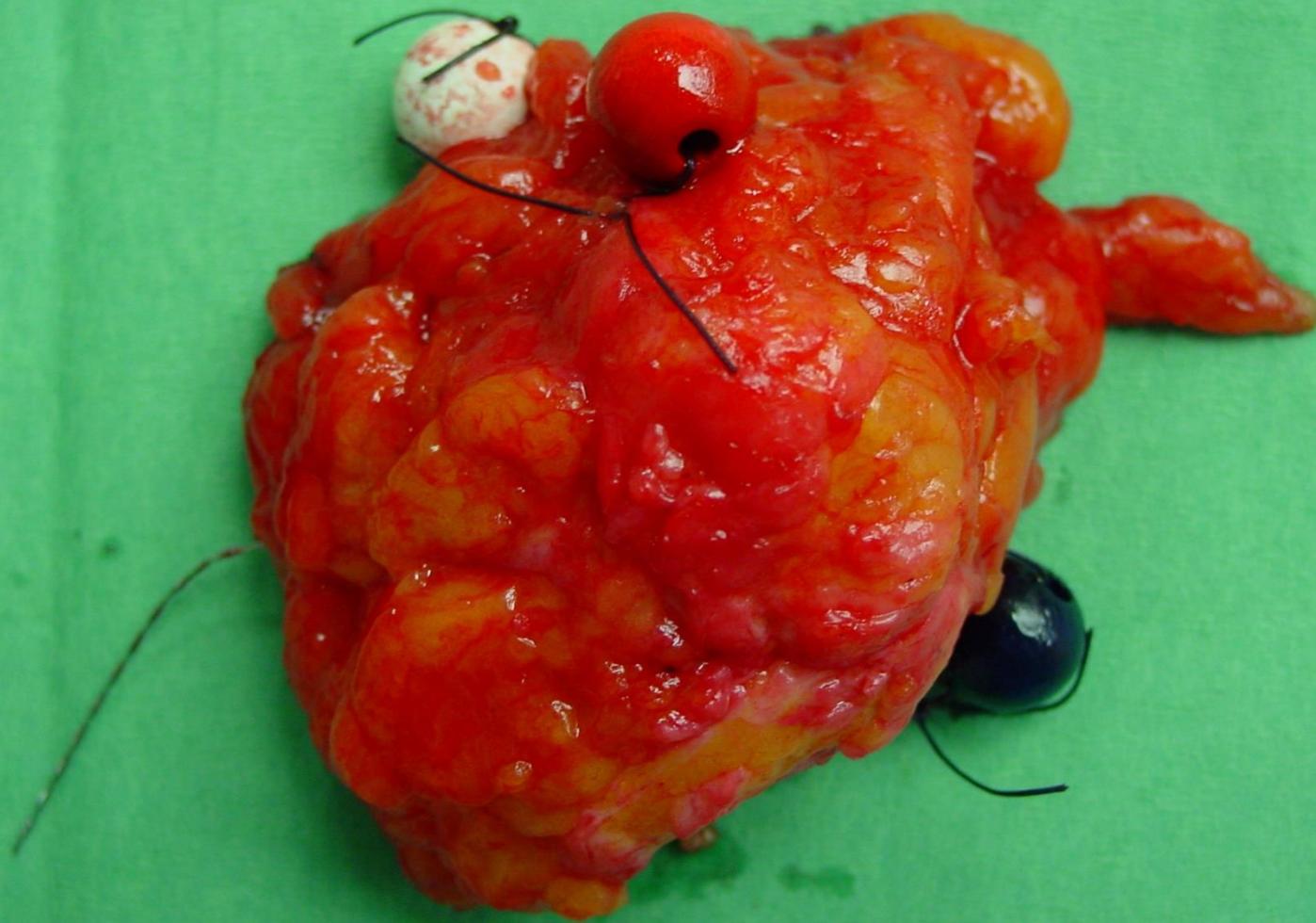
The basics in oncology

In Oncology:

No diagnosis by the pathologist

No treatment that can be started.



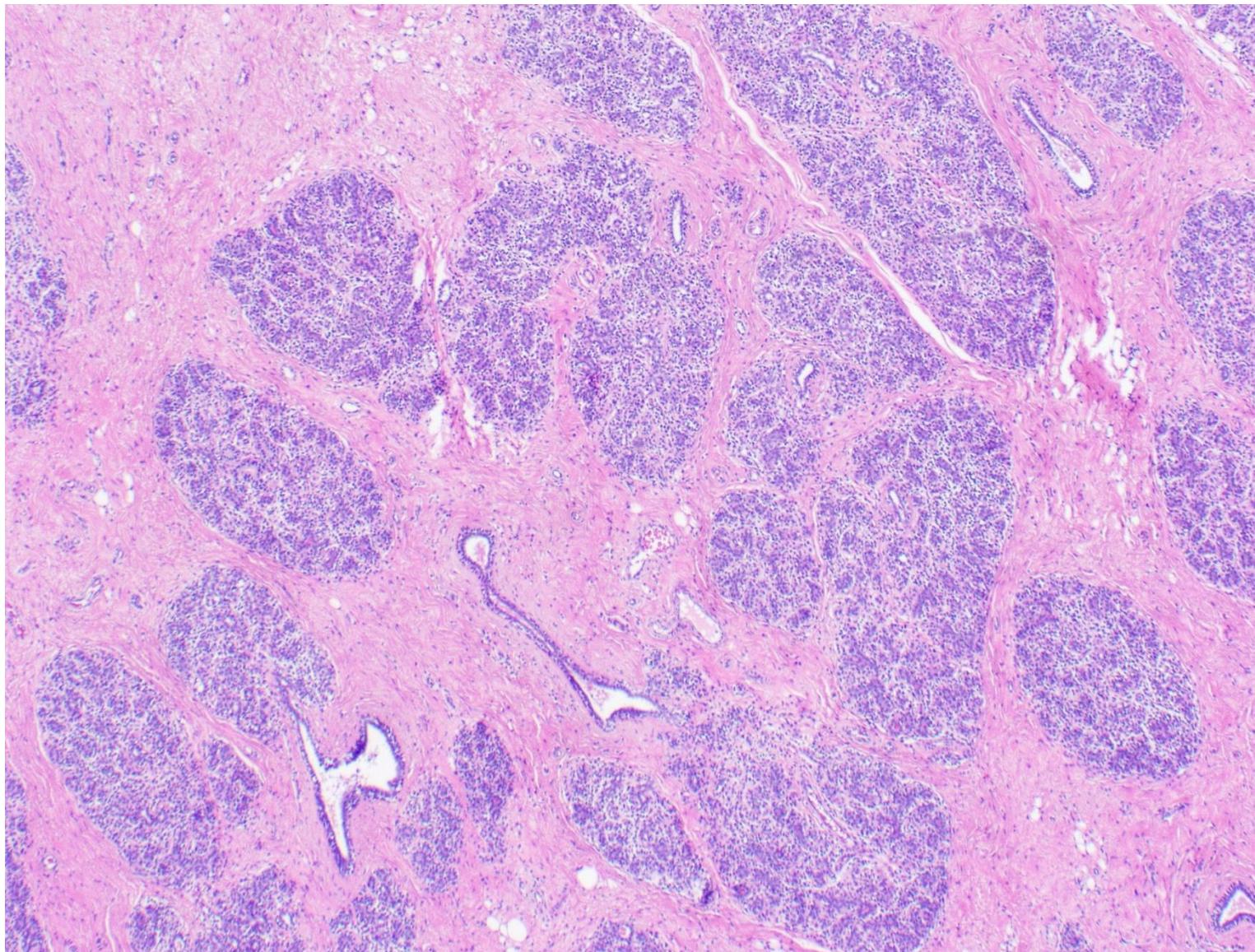




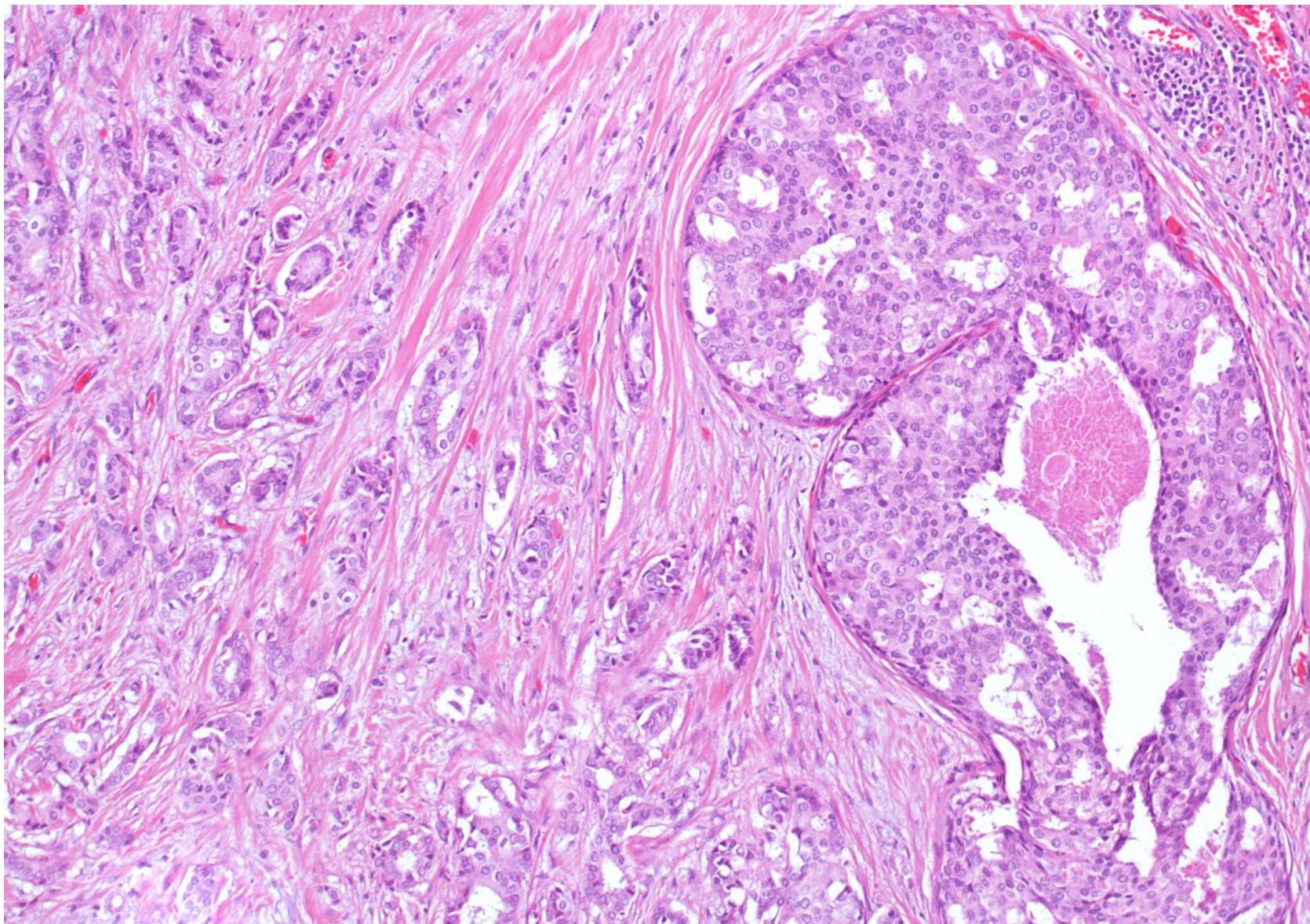
Classical questions to the pathologist, by clinicians ad well as patients

- Is it cancer?
- Is there still cancer left in my body?
- Is the cancer local or has it spread to other organs?
- How should I treat my patient?
 - Prognosis versus prediction.

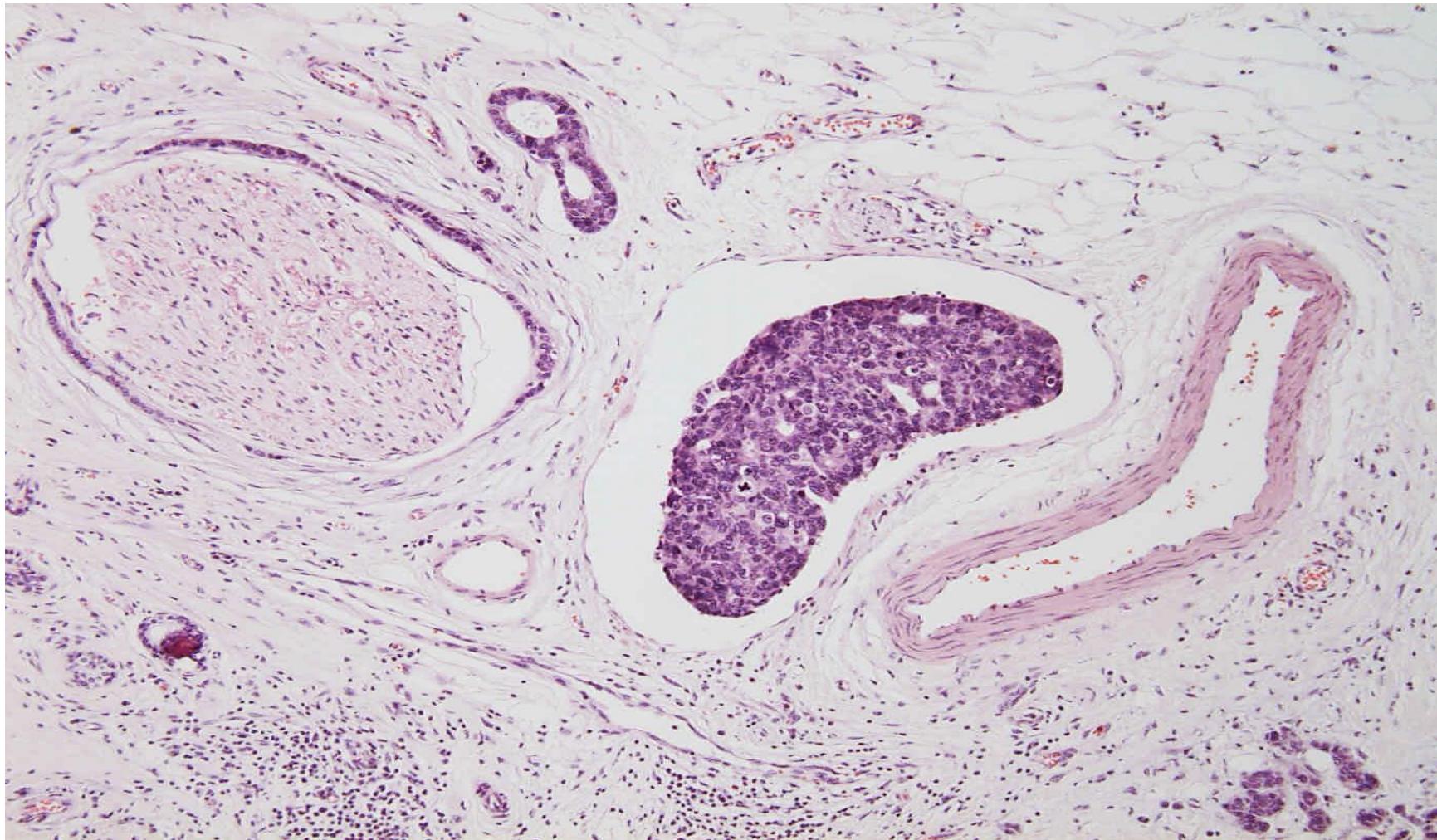
Normal breast

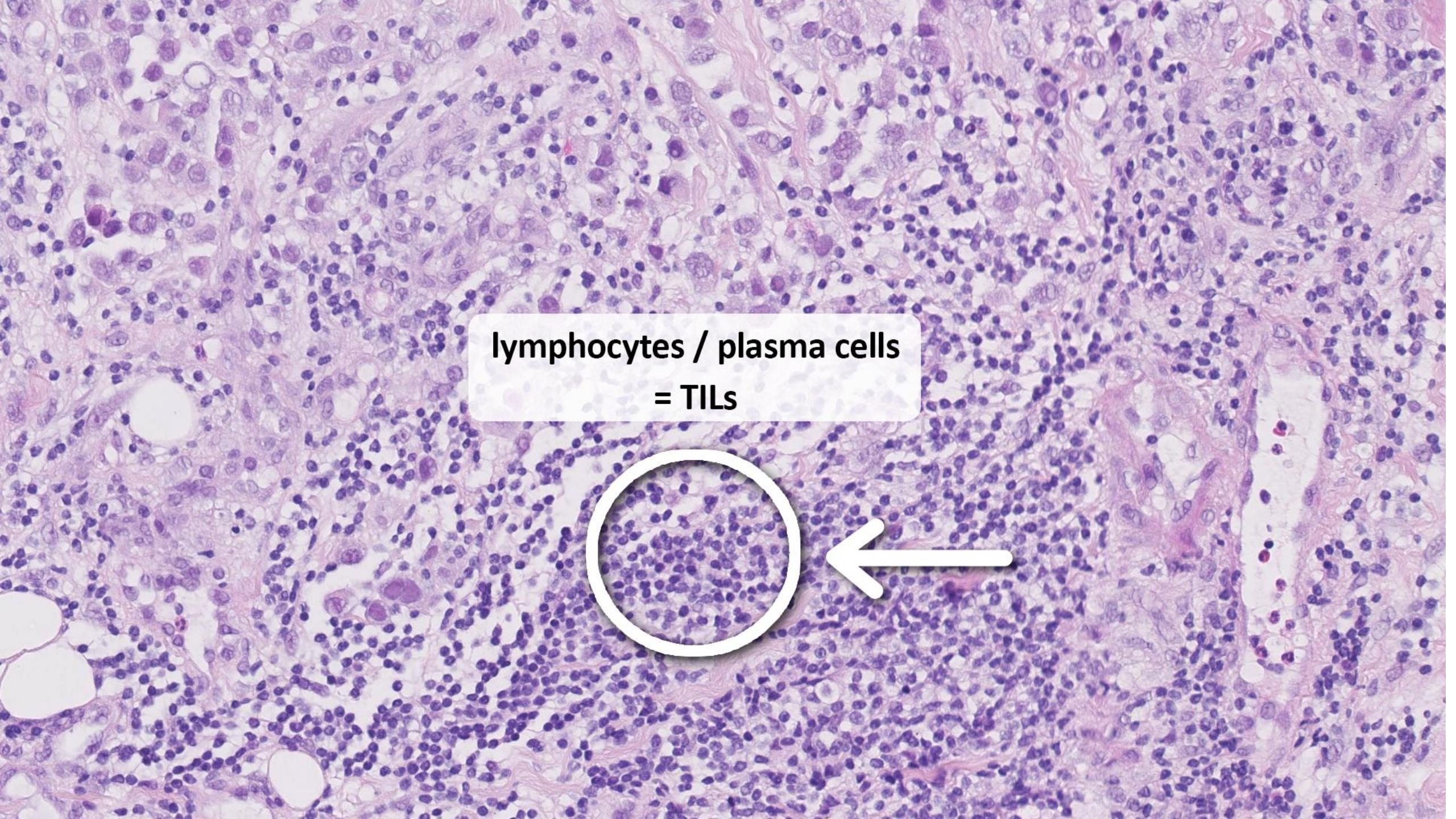


This is breast cancer



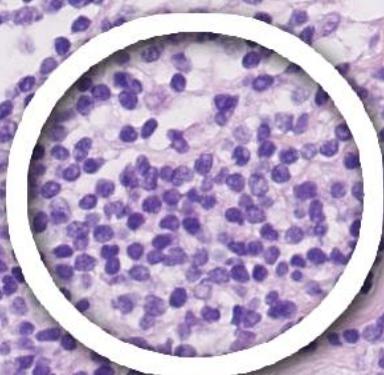
Is the cancer in the vessels?





lymphocytes / plasma cells

= TILs



A Real-Case example

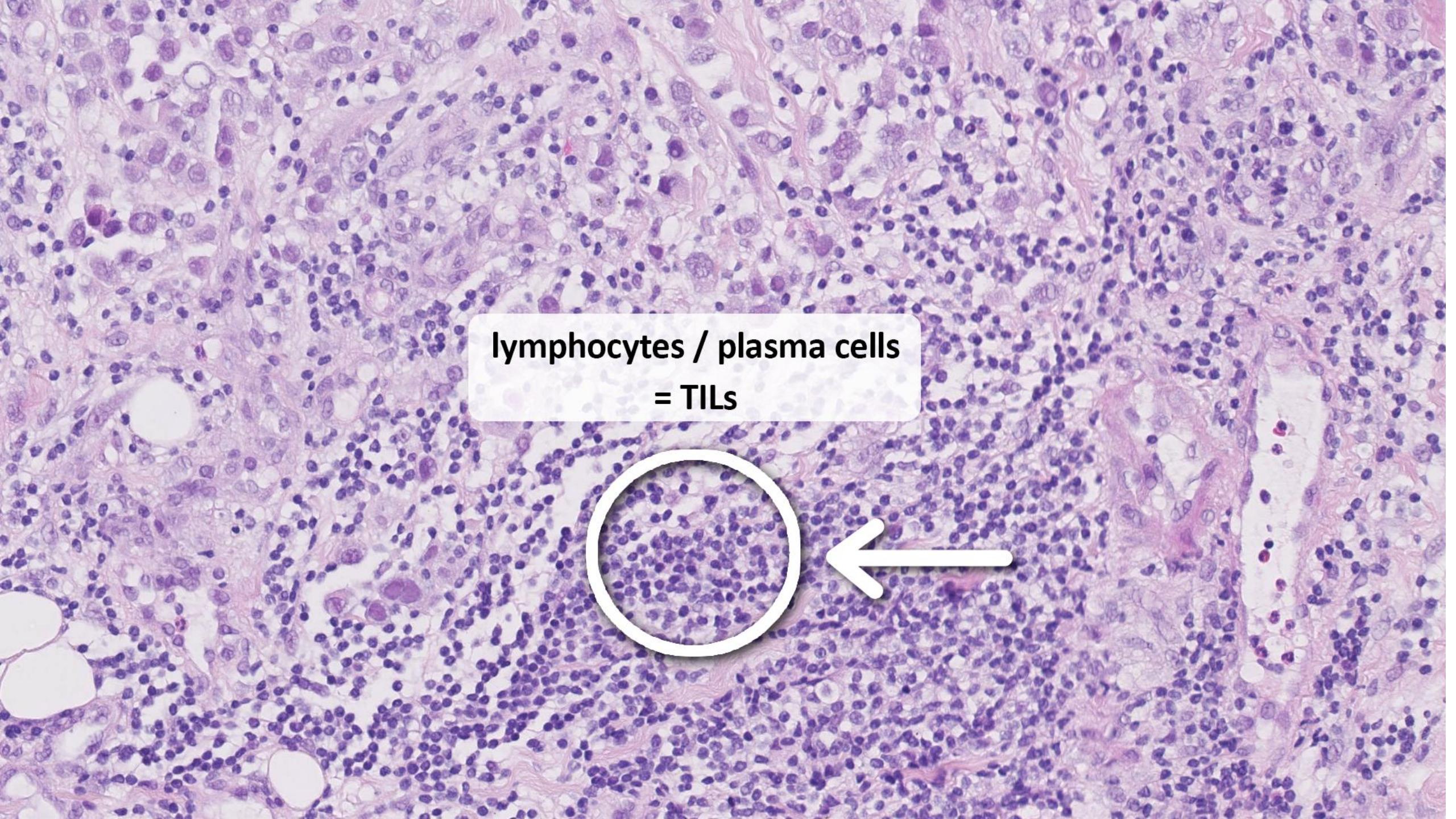


Erin's journey

Case Presentation & Timeline:

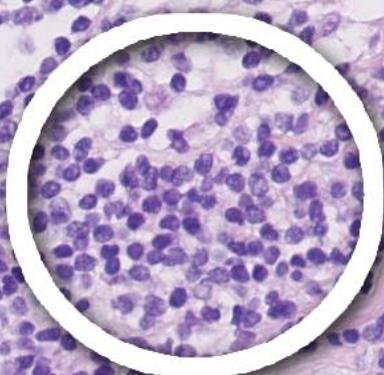
- 48 y/o Athletic Female, Emergency Room Physician, Metabolic Health Coach
- Oct. 26: Biopsy confirms TNBC with Medullary Features.. Marked Tumor Infiltrating Lymphocytes (later called “a ton of TILs”)



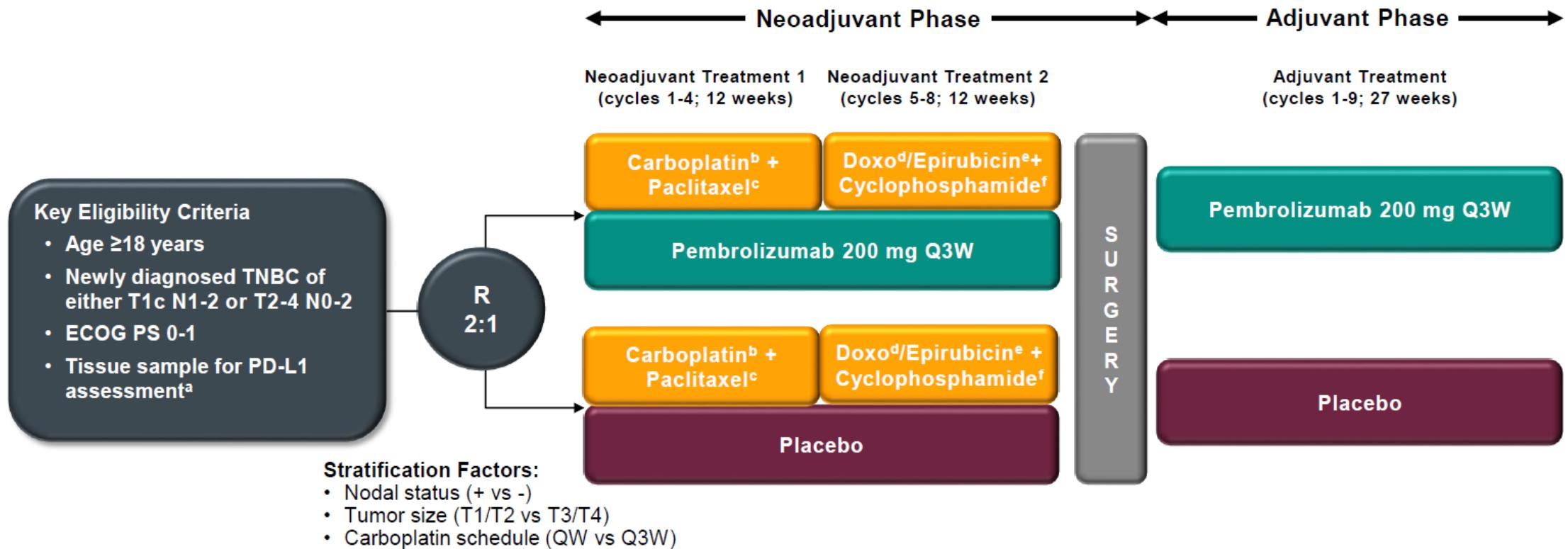


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THE STANDARD TREATMENT OF HIGH-RISK TNBC IS BASED ON THIS TRIAL, THE KN522



De Jong et al. ESMO 2020, J Clin Oncol 2022

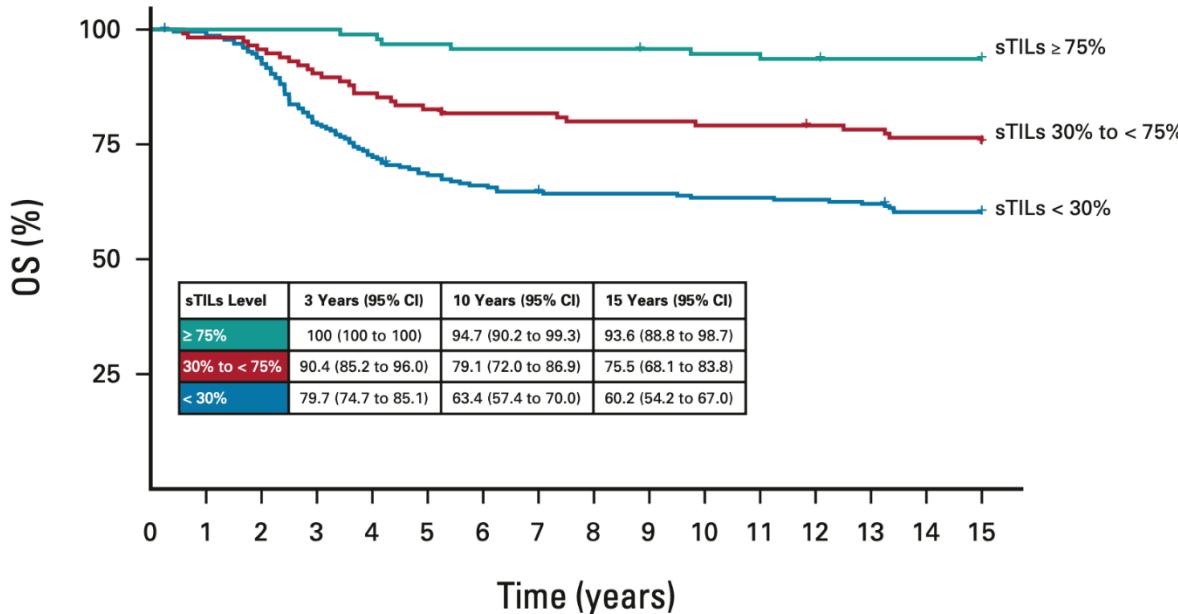
- Study design: Population based cohort study
- Patient selection criteria:
 - All patients < 40 years **diagnosed between 1989-2000** in the Netherlands

Chemotherapy was not standard for N0 so no confounding by indication

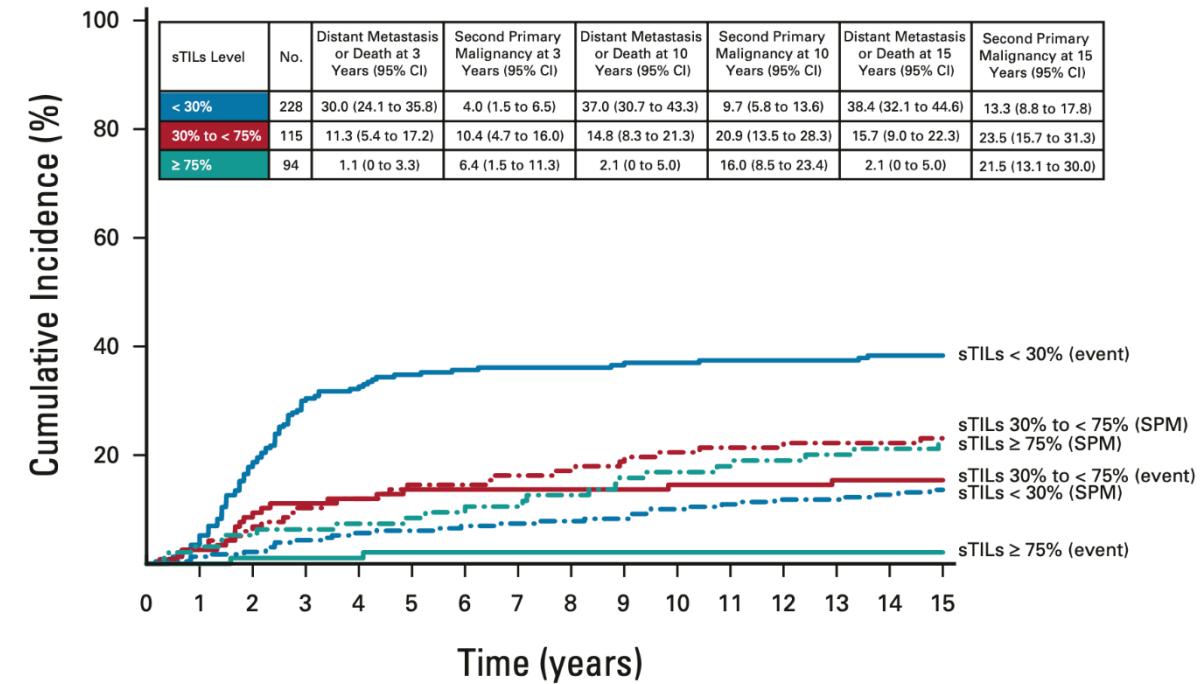
- N0; systemic therapy naïve
- T1abc n=252, T2-3 n=185

sTILs $\geq 75\%$, 15-yrs OS 94% with only 2% distant metastasis

A



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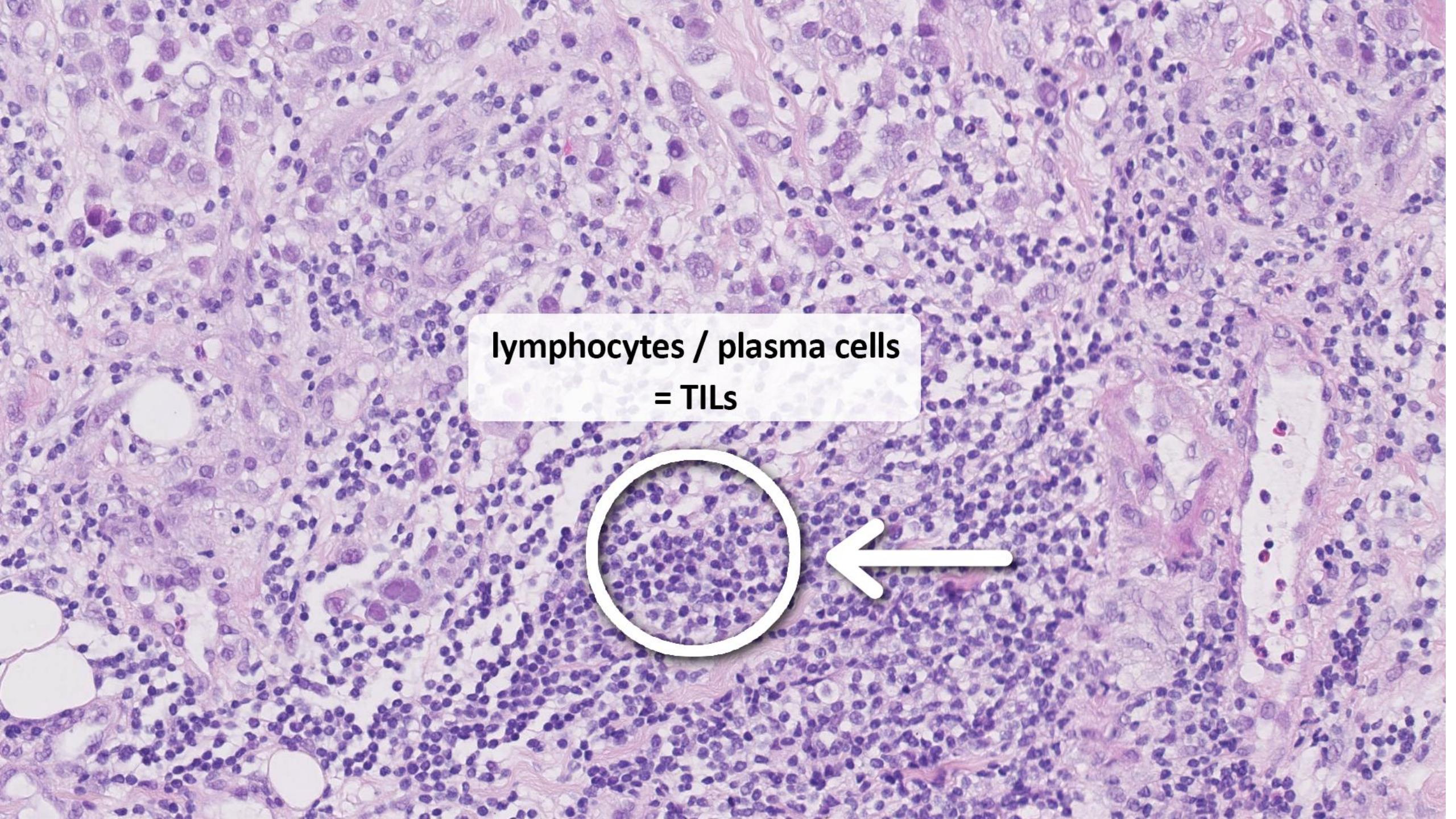


**The great news is that the tumor has shrunk already!!
So, that has us thinking about de-escalation strategies**

(mail Adam/Erin on January 4th, 2023).

**Unfortunately, our oncologist team remains very
reluctant to de-escalate Keynote-522.**

(Mail Adam/Erin January 31st, 2023)



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“I do have good news for you! My initial surgery on July 5 revealed excellent results:

First of all, my surgeon was able to choose a nipple sparing bilateral mastectomy after my MRI revealed no residual cancer. Initially, my lesion was so close to the nipple that we did not think this would be possible . Obviously, this will lead to a better cosmetic result overall.

The breast tissue that was removed, as well as 2 axillary lymph nodes (including the sentinel node) on the left all showed no cancer. Complete PCR!”

(mail Adam/Erin on August 8th, 2023).

“The universal response was “you are handling the treatment well, so no reason to stop now”.

“Handling it well” included immediate loss of my thyroid function (another good indicator) after suffering through severe hyperthyroid symptoms, tremendous fatigue, dehydration, confusion, nausea, explosive diarrhea, severe thrush, sleep disruption, night sweats, hair loss, scalp tenderness, bone pain, joint pain, muscle pain... This is aside from loss of salary due to inability to work, inability to drive due to brain fog, loss of independence, loss of confidence, loss of high-level reasoning, loss of mobility... just to name a few. “

“I have opted to stop with post operative immunotherapy. This is, of course, going against the current standard , laid out in the Keynote protocol. Both of my oncologists frowned upon this decision.

However, I feel confident in quitting based on my pathology, my results, and other studies. My decision to stop immunotherapy was due to ongoing exhaustion, along with pain in my muscles, bones, and tendons. I am not experiencing these symptoms anymore. I will remain on levothyroxine, likely for life, due to the side effects of immunotherapy.

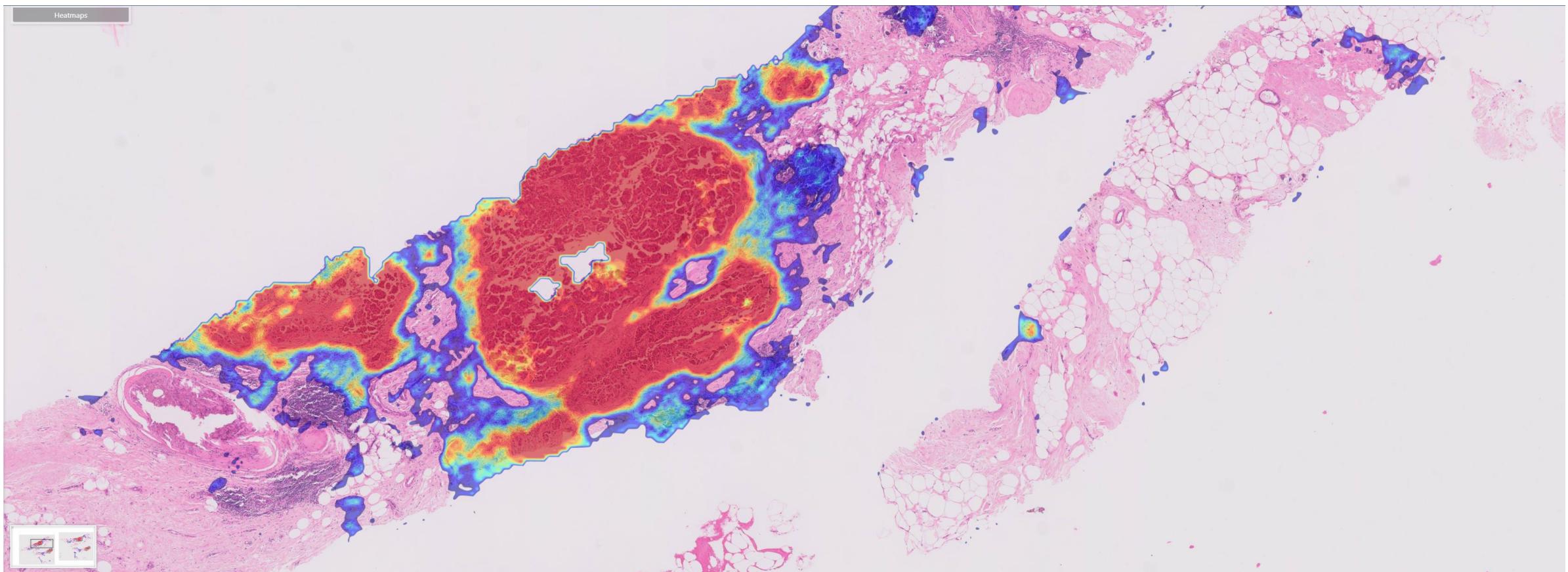
(mail Adam/Erin on August 8th, 2023).

The future

Anatomic Pathology-consultations

If you want to see how this works in the real world, and where patients can see how their cancer looks like, and why you get the treatment you get, we can show you in ZAS Hospitals, Antwerp, Belgium.

Use of Artificial Intelligence



Thank you for your attention

Also, to Koen vd Vijver (UZ Gent) en Frederik Deman (ZAS, Antwerp) for some slides

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