# Breast Cancer Patient Journey

TEAM 1
Angeli De Los Reyes
Javier Merino
Meyliani Sanjaya
Nay Zaw Lin

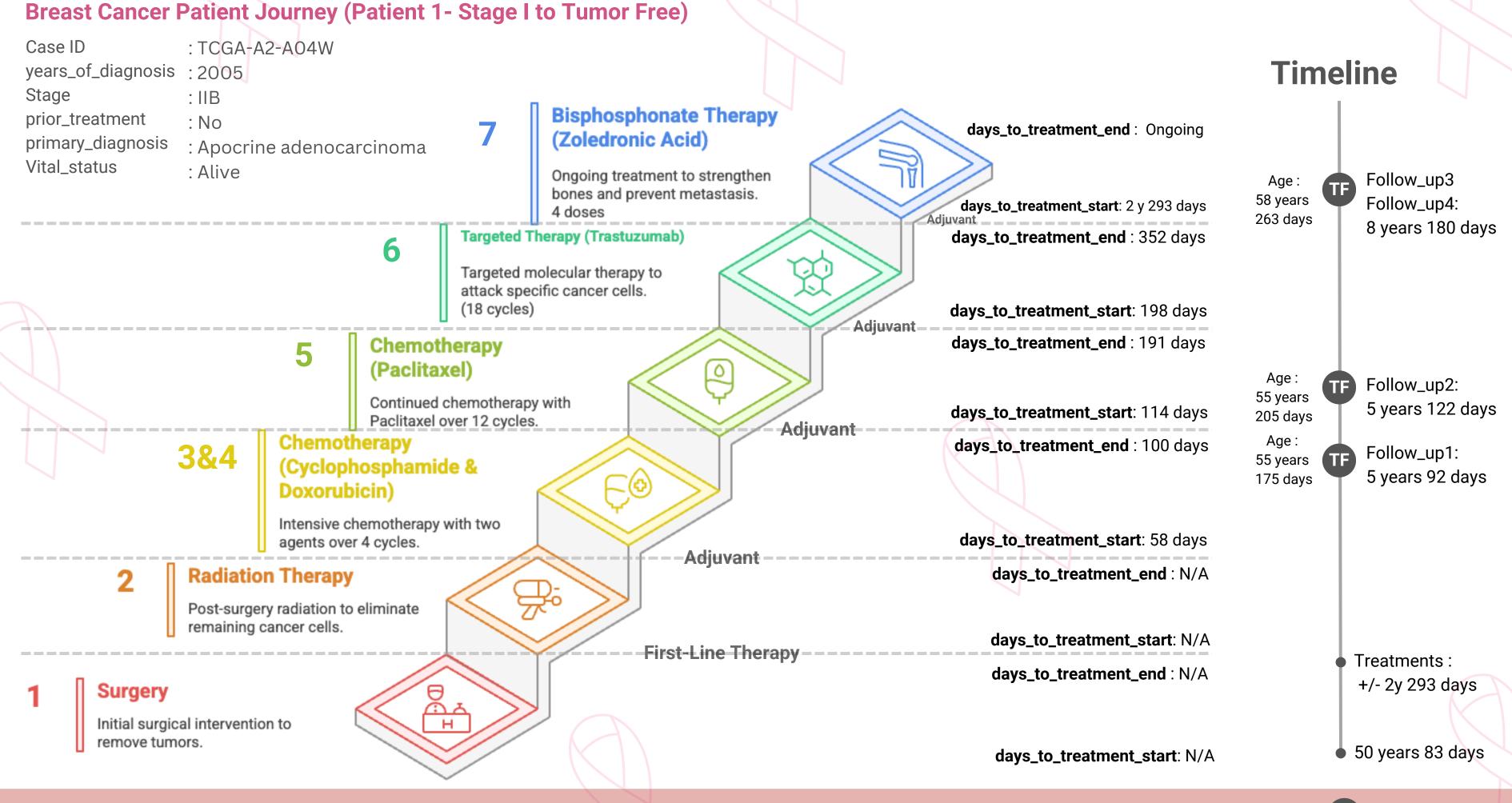
## Background

This study presents observations from three individual breast cancer patient cases, focusing on their treatment histories and timelines to achieve a tumor-free (TF) status. Each case highlights the specific therapies administered, such as surgery, radiation, chemotherapy, hormone therapy, or pharmaceutical therapy and the sequence in which they were applied.

The aim is to understand the variation in treatment responses and disease progression among patients.

All patient data and clinical insights are sourced from:

- Genomic Data Commons (GDC) Data Portal (https://portal.gdc.cancer.gov/)
- Supporting information referenced from the official GDC Documentation (https://docs.gdc.cancer.gov/).
- Relational Database Schema based on the structure and relationships observed in the Genomic Data
  Commons (GDC) Data Portal. The diagram illustrates how core entities such as case, demographic,
  diagnoses, treatments, follow up, samples and assay are interconnected through foreign key relationships.
  DB Diagram can be found at https://dbdiagram.io/d/GDC-Clinical-67ddce3675d75cc8440595a0.



#### **Breast Cancer Patient Journey (Patient 2 - Stage I with Metastasis and Recurrence)**

Case ID : TCGA-E2-A152

years\_of\_diagnosis : 2009

Stage prior\_treatment : No

primary\_diagnosis : Infiltrating duct carcinoma

Vital\_status : Alive **Hormone Therapy** 

Hormonal treatment with Anastrozole, given as a single dose to block estrogen effects on cancer cells.

**Chemotherapy (Cycle 2)** 

Single-agent therapy with Nab-paclitaxel, administered in six cycles to further

suppress tumor growth.

Chemotherapy (Cycle 1)
Combination therapy Involves three
therapeutic agents Cyclophosphamide,

Docetaxel, and Trastuzumab over 1 cycle

Radiation Therapy
Post-surgery radiation to eliminate

any residual cancer cells.

Surgery

Initial surgical intervention to remove the primary tumor. First-Line Therapy

Adjuvant

**Adjuvant** 

**Breast** 

days\_to\_treatment\_end: N/A

days\_to\_treatment\_start: 231 days

days\_to\_treatment\_end : 217 days

days\_to\_treatment\_start: 63 days

days\_to\_treatment\_end: 42 days

days\_to\_treatment\_start: 42 days

days\_to\_treatment\_end: N/A

days\_to\_treatment\_start: N/A

days\_to\_treatment\_end: N/A

days\_to\_treatment\_start: N/A

#### **Breast Cancer Patient Journey (Patient 2 - Stage I with Metastasis and Recurrence)**

Case ID : TCGA-E2-A152

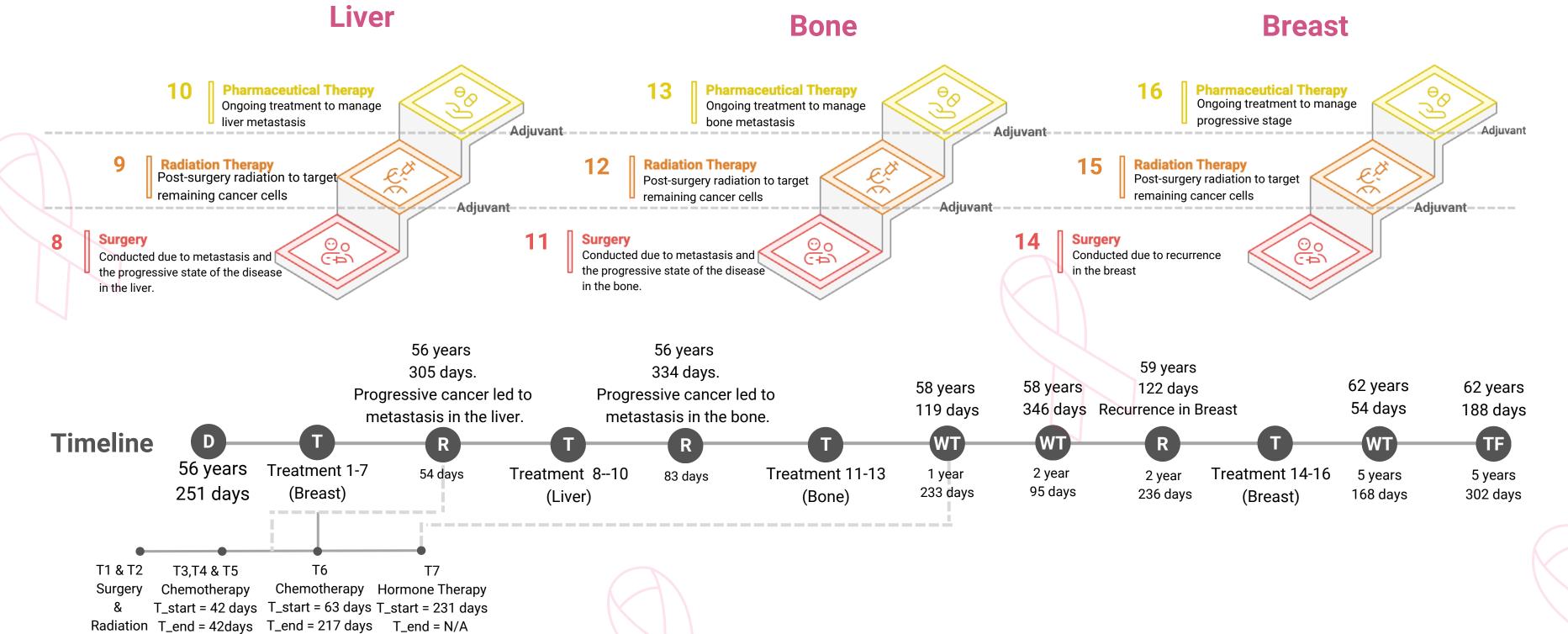
years\_of\_diagnosis : 2009

Stage : I

prior\_treatment : No

primary\_diagnosis : Infiltrating duct carcinoma

Vital\_status : Alive



#### **Breast Cancer Patient Journey**

Case ID : TCGA-E2-A150

years\_of\_diagnosis : 2010

Stage :

prior\_treatment : No

primary\_diagnosis : Infiltrating duct carcinoma

(Patient 3 - Stage I (Left Breast), Stage IIA (Right Breast) and Recurrence (Left Breast)

Vital\_status : Alive

#### First-Line Therapy

Initial surgical intervention to remove cancer.

#### Hormone Therapy(Anastrozole)

Estrogen-blocking medication to reduce hormone-driven cancer growth (89 years132 days)

Ongoing Hormone Therapy (Letrozole)

Ongoing hormonal treatment to maintain long-term suppression of cancer activity (90 years)

#### **Pharmaceutical Therapy**

Managing tumor growth or recurrence through systemic action

#### **Radiation Therapy**

Post-surgery radiation therapy

#### **Final Response**

Tumor Free (90 years)

#### **Initial Diagnosis**

EXE

RB

The patient was diagnosed with Stage I cancer in the left breast. (89 years 76 days)

#### **Radiation Therapy**

Post-surgery radiation therapy

### Hormone Therapy Continuation (Exemestane)

Lower estrogen levels and prevent recurrence. (89 years 172 days)

#### Radiation Therapy on Synchronous Primary

Eliminate the tumor in the right breast (Stage IIA)

#### **Recurrence Treatment**

Surgical resection performed to remove the recurrent tumor in left breast

### Final Pharmaceutical Therapy

Medication-based therapy to managed tumor growth

# Thank you!