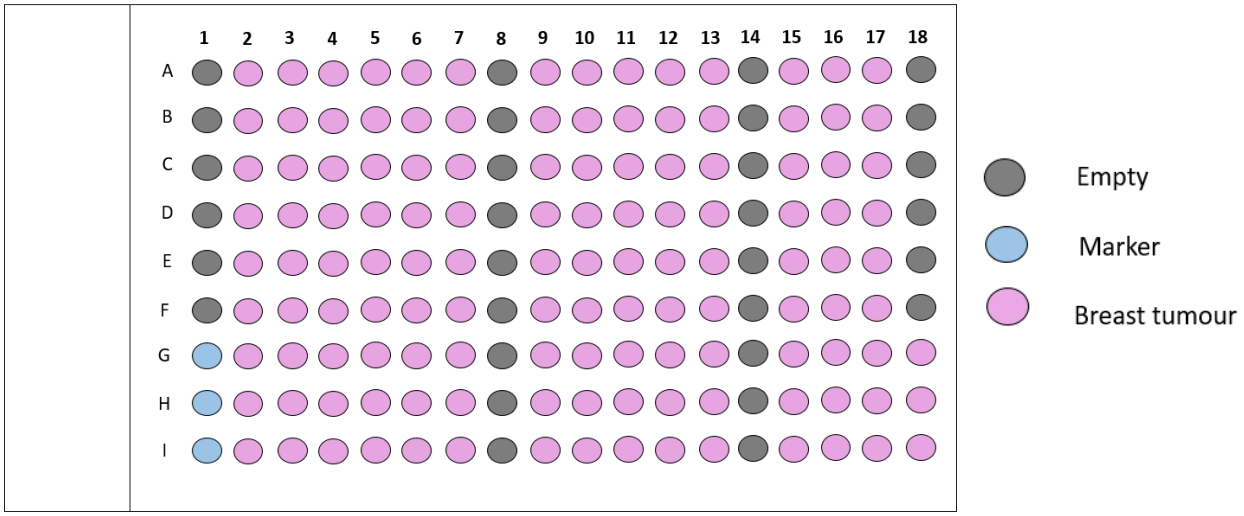
MBB1: Breast Tumour Tissue Array (Human)

129 cases and 3 markers, include pathological grade, and TNM.

Description

Product code	MBB1
Cases	129
Row number	18
Column number	9
Core diameter (mm)	0.6
Thickness	4μm
Tissue array type	FFPE
Species	Human
Application	• Immunohistochemistry • In situ hybridization • Fluorescent in situ hybridization • Terminal deoxynucleotidyl transferase dUTP nick-end labeling (TUNEL) analysis • In situ polymerase chain reaction (In situ PCR)
Notes	• Storage temperature : 4°C • Shipping temperature : Ambient

TMA map:



Position	Age	Gender	Pathology diagnosis	TNM	Grade	Type of tumour
A1						
A2	45	F	Invasive ductal carcinoma	T1c NX MX	2	Malignant
A3	53	F	Invasive ductal carcinoma	T2 N2a MX	3	Malignant
A4	42	F	Invasive ductal carcinoma	T2 N1a MX	3	Malignant
A5	35	F	Invasive ductal carcinoma	T2/T1b N0 MX	3	Malignant
A6	58	F	Invasive ductal carcinoma	T3 N3 MX	2	Malignant
A7	65	F	Invasive ductal carcinoma	T2/T1b N1a MX	2	Malignant
A8						
A9	55	F	Invasive ductal carcinoma	N/A	2	Malignant
A10	51	F	Invasive ductal carcinoma	T2 NX MX	3	Malignant
A11	53	F	Invasive ductal carcinoma	T3/T1c N2a MX	3	Malignant
A12	67	F	Invasive lobular carcinoma	T1b NX MX	2	Malignant
A13	51	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
A14						
A15	45	F	Invasive ductal carcinoma	T3 N3 MX	3	Malignant
A16	60	F	Invasive ductal carcinoma	T2 N2a MX	3	Malignant
A17	54	F	Invasive ductal carcinoma	T2 NX MX	2	Malignant
A18						
B1						
B2	40	F	Invasive ductal carcinoma	T2 N2a MX	2	Malignant
B3	56	F	Invasive ductal carcinoma	T1c N2a MX	3	Malignant
B4	57	F	Invasive ductal carcinoma	T3 NX MX	3	Malignant
B5	82	F	Invasive ductal carcinoma	T2 N3 MX	3	Malignant
B6	62	F	Invasive ductal carcinoma	T1c N1a MX	2	Malignant
B7	70	F	Invasive ductal carcinoma	T2 N0 MX	2	Malignant
B8						
B9	49	F	Invasive ductal carcinoma	T1c NX MX	3	Malignant
B10	47	F	Invasive ductal carcinoma	T2 N1a MX	3	Malignant
B11	69	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
B12	61	F	Invasive ductal carcinoma	T1c NX MX	3	Malignant
B13	55	F	Invasive ductal carcinoma	T1c NX MX	3	Malignant
B14						
B15	49	F	Invasive ductal carcinoma	T2 NX MX	2	Malignant
B16	55	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
B17	41	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
B18						
C1						
C2	53	F	Invasive ductal carcinoma	T2/T1c N2a MX	2	Malignant
C3	62	F	Invasive ductal carcinoma	T2 NX MX	3	Malignant
C4	48	F	Invasive ductal carcinoma	T1c N1a MX	3	Malignant
C5	61	F	Invasive lobular carcinoma	T1c NX MX	3	Malignant
C6	51	F	Invasive ductal carcinoma	T1c N0 MX	3	Malignant
C7	70	F	Invasive ductal carcinoma	T1c N0 MX	2	Malignant
C8						
C9	49	F	Invasive ductal carcinoma	T1c N0 MX	3	Malignant
C10	36	F	Invasive ductal carcinoma	T2 N1 MX	3	Malignant
C11	71	F	Invasive ductal carcinoma	T2 N1 MX	3	Malignant

C12	38	F	Invasive ductal carcinoma	T1c NX MX	2	Malignant
C13	60	F	Invasive ductal carcinoma	T4b N1a MX	3	Malignant
C14						
C15	57	F	Invasive ductal carcinoma	T2 N2a MX	3	Malignant
C16	56	F	Invasive ductal carcinoma	T3 N2a MX	3	Malignant
C17	36	F	Invasive ductal carcinoma	T1c N0 MX	3	Malignant
C18						
D1						
D2	61	F	Encysted papillary carcinoma	T2 N0 MX	2	Malignant
D3	38	F	Invasive ductal carcinoma	T2 N2a MX	3	Malignant
D4	51	F	Invasive ductal carcinoma	T2 N2a MX	3	Malignant
D5	68	F	Invasive ductal carcinoma	T2 N1a MX	3	Malignant
D6	51	F	Invasive ductal carcinoma	T1c N1 MX	2	Malignant
D7	81	F	Invasive ductal carcinoma	T1c NX MX	2	Malignant
D8						
D9	66	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
D10	62	F	Invasive ductal carcinoma	T1c N0 MX	3	Malignant
D11	47	F	Invasive ductal carcinoma	T2 N3c MX	3	Malignant
D12	40	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
D13	53	F	Invasive ductal carcinoma	T4b N3a MX	3	Malignant
D14						
D15	42	F	Invasive ductal carcinoma	T2 N1 MX	2	Malignant
D16	67	F	Invasive ductal carcinoma	T2 N1c MX	2	Malignant
D17	71	F	Invasive ductal carcinoma	T1c N0 MX	1	Malignant
D18						
E1						
E2	64	F	Invasive ductal carcinoma	T1c N0 MX	2	Malignant
E3	41	F	Invasive ductal carcinoma	T4b N2a MX	3	Malignant
E4	76	F	Invasive ductal carcinoma	T1c N0 MX	3	Malignant
E5	33	F	Invasive ductal carcinoma	T1c N1a MX	3	Malignant
E6	43	F	Invasive ductal carcinoma	T4b N3a MX	2	Malignant
E7	63	F	Invasive ductal carcinoma	T1c N0 MX	2	Malignant
E8						
E9	57	F	Invasive ductal carcinoma	T1c NX MX	3	Malignant
E10	41	F	Invasive ductal carcinoma	T3 N1 MX	3	Malignant
E11	54	F	Invasive ductal carcinoma	N/A	3	Malignant
E12	56	F	Invasive ductal carcinoma	T2 NX MX	3	Malignant
E13	49	F	Invasive ductal carcinoma	T2 NX MX	3	Malignant
E14						
E15	71	F	Invasive ductal carcinoma	T1c NX MX	2	Malignant
E16	63	F	Invasive ductal carcinoma	T4b N2a MX	2	Malignant
E17	42	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
E18						
F1						
F2	48	F	Invasive ductal carcinoma	T2 N0 MX	2	Malignant
F3	44	F	Invasive ductal carcinoma	T1c NX MX	2	Malignant
F4	59	F	Invasive ductal carcinoma	T2 NX MX	3	Malignant
F5	49	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant

F6	47	F	Invasive ductal carcinoma	T2 N2a MX	2	Malignant
F7	51	F	Invasive ductal carcinoma	T4b N3a MX	2	Malignant
F8						
F9	40	F	Invasive ductal carcinoma	T1c NX MX	3	Malignant
F10	67	F	Invasive ductal carcinoma	T3 NX MX	3	Malignant
F11	61	F	Invasive ductal carcinoma	T3 N2 MX	3	Malignant
F12	56	F	Invasive ductal carcinoma	T2 N1a MX	3	Malignant
F13	52	F	Invasive ductal carcinoma	T2 N2a MX	3	Malignant
F14						
F15	48	F	Invasive ductal carcinoma	T2 N1 MX	2	Malignant
F16	63	F	Invasive ductal carcinoma	T2 N3a MX	3	Malignant
F17	51	F	Invasive lobular carcinoma	T2 N2a MX	2	Malignant
F18						
G1	Marker					
G2	58	F	Invasive ductal carcinoma	T2 N2 MX	2	Malignant
G3	54	F	Invasive ductal carcinoma	T1c NX MX	2	Malignant
G4	53	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
G5	46	F	Invasive ductal carcinoma	T2 N1a MX	3	Malignant
G6	61	F	Invasive ductal carcinoma	T1c N0 MX	3	Malignant
G7	59	F	Invasive ductal carcinoma	T1c N0 MX	2	Malignant
G8						
G9	49	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
G10	51	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
G11	59	F	Invasive ductal carcinoma	T1c N1a MX	3	Malignant
G12	72	F	Invasive ductal carcinoma	T1c NX MX	2	Malignant
G13	50	F	Invasive ductal carcinoma	T2 N2 MX	2	Malignant
G14						
G15	68	F	Invasive ductal carcinoma	T2 N1a MX	3	Malignant
G16	60	F	Invasive ductal carcinoma	T1c N1a MX	2	Malignant
G17	67	F	Invasive ductal carcinoma	T2 N2 MX	2	Malignant
G18	52	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
H1	Marker					
H2	62	F	Invasive ductal carcinoma	T4b N1 MX	2	Malignant
H3	35	F	Invasive ductal carcinoma	N/A	2	Malignant
H4	70	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
H5	79	F	Invasive ductal carcinoma	T2 N2a MX	3	Malignant
H6	30	F	Invasive ductal carcinoma	T1c N0 MX	2	Malignant
H7	68	F	Invasive ductal carcinoma	T1c N0 MX	2	Malignant
H8						
H9	40	F	Invasive ductal carcinoma	T4b N2a MX	3	Malignant
H10	46	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
H11	56	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
H12	56	F	Invasive ductal carcinoma	T1c N2 MX	3	Malignant
H13	58	F	Invasive ductal carcinoma	T4b N0 MX	2	Malignant
H14						
H15	47	F	Invasive ductal carcinoma	T1c N0 MX	2	Malignant
H16	50	F	Invasive ductal carcinoma	T1c N1a MX	3	Malignant
H17	60	F	Invasive ductal carcinoma	T2 N3a MX	2	Malignant
H18	59	F	Invasive ductal carcinoma	T2 NX MX	2	Malignant

I1	Marker					
I2	66	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
I3	44	F	Invasive ductal carcinoma	T1c N1a MX	2	Malignant
I4	43	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
I5	55	F	Invasive ductal carcinoma	T1c N2a MX	3	Malignant
I6	63	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
I7	68	F	Invasive ductal carcinoma	T4b N1a MX	2	Malignant
I8						
I9	45	F	Invasive ductal carcinoma	T2 NX MX	2	Malignant
I10	55	F	Invasive ductal carcinoma	T2 N1a MX	3	Malignant
I11	48	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
I12	52	F	Invasive ductal carcinoma	T4b N3a MX	3	Malignant
I13	55	F	Invasive ductal carcinoma	T2 NX MX	2	Malignant
I14						
I15	54	F	Invasive ductal carcinoma	T1c N1a MX	3	Malignant
I16	65	F	Invasive ductal carcinoma	T1c N0 MX	2	Malignant
I17	64	F	Invasive ductal carcinoma	T2 N0 MX	3	Malignant
I18	38	F	Invasive ductal carcinoma	T2 N1a MX	2	Malignant

Stage description

The American Joint Committee on Cancer (AJCC) TNM system is the frequently employed breast cancer staging system, and it is based on seven important elements:

- **The extent (size) of the tumor (T):** How large is the cancer? Has it grown into nearby areas?
- **The spread to nearby lymph nodes (N):** Has the cancer spread to nearby lymph nodes? If so, how many?
- **The spread (metastasis) to distant sites (M):** Has the cancer spread to distant organs such as the lungs or liver?
- **Grade of the cancer (G):** How much do the cancer cells look like normal cells?
- **Estrogen Receptor (ER) status:** Does the cancer have the protein called an estrogen receptor?
- **Progesterone Receptor (PR) status:** Does the cancer have the protein called a progesterone receptor?
- **HER2 status:** Does the cancer make too much of a protein called HER2?

Tumor (T)

T1: Tumour ≤ 20 mm in greatest dimension.

T1a: Tumor > 1 mm but ≤ 5 mm in greatest dimension (round any measurement >1.0-1.9 mm to 2 mm).

T1b: Tumor > 5 mm but ≤ 10 mm in greatest dimension

T1c: Tumor > 10 mm but ≤ 20 mm in greatest dimension

T2: Tumour > 20 mm but ≤ 50 mm in greatest dimension.

T3: Tumour > 50 mm in greatest dimension.

T4: Tumor of any size growing into the chest wall or skin. This includes inflammatory breast cancer.

T4a: Extension to chest wall, not including only pectoralis muscle adherence/invasion

T4b: Ulceration and/or ipsilateral satellite nodules and/or edema (including peau d'orange) of the skin, which do not meet the criteria for inflammatory carcinoma.

T4c: Both T4a and T4b.

T4d: Inflammatory carcinoma.

Nodes (N)

NX: Nearby lymph nodes cannot be assessed.

N0: No regional lymph node metastasis identified histologically.

N1: Micrometastases; or metastases in 1-3 axillary lymph nodes and/or in internal mammary nodes; and/or in clinically negative internal mammary nodes with micrometastases or macrometastases by sentinel lymph node biopsy.

N1a: Metastases in 1-3 axillary lymph nodes (at least 1 metastasis > 2.0 mm).

N1b: Metastases in ipsilateral internal mammary lymph nodes, excluding ITCs, detected by sentinel lymph node biopsy

N1c: Combination of N1a and N1b

N2: Metastases in 4-9 axillary lymph nodes; or positive ipsilateral internal mammary lymph nodes by imaging in the absence of axillary lymph node metastases.

N2a: Metastases in 4-9 axillary lymph nodes (at least 1 tumor deposit > 2.0 mm).

N2b: Metastases in one or more internal mammary lymph nodes, causing them to become enlarged.

N3: Any of the following:

N3a: Metastases in ≥ 10 axillary lymph nodes (at least 1 tumor deposit > 2.0 mm); or metastases to the infraclavicular (level III axillary lymph) nodes.

N3b: Metastases in at least one axillary lymph nodes (at least 1 tumor deposit > 2.0 mm) and has enlarged the internal mammary lymph nodes; or metastases in 4 or more axillary lymph nodes (at least 1 tumor deposit > 2.0 mm) and in the internal mammary lymph nodes on sentinel lymph node biopsy.

N3c: Cancer has spread to the lymph nodes above the collarbone (supraclavicular nodes) on the same side of the cancer with at least one area of cancer spread greater than 2 mm.

Metastasis (M)

M0: No clinical or radiographic evidence of distant metastasis .

M1: Any histologically proven metastases in distant organs; or if in non-regional nodes, metastases > 0.2 mm.

Mx: Distant metastasis cannot be assessed.