Histological tumour type (Core)

To ensure consensus and consistency of reporting, it is recommended to use the most recent edition of the World Health Organization (WHO) Classification of Breast Tumours, 5th edition, 2019, nomenclature and definitions for diagnosis and classification of invasive tumour type (Table 1).[1] The International Collaboration on Cancer Reporting (ICCR) dataset includes 5th edition Corrigenda, September 2020.[2]

Determination of histologic type is based on routine histologic examination; special stains such as e-cadherin are not required for determining histologic type. Special type carcinomas should consist of at least 90% pure pattern. Therefore, classification as a pure special type cannot be determined with certainty on a limited core biopsy sample and will usually require findings in the resection.

Some invasive breast carcinomas and invasive breast carcinoma of no special type (IBC-NST) can contain a mixture of both no special type and a special subtype. If the special subtype makes up 10-90% of the cancer, the term “mixed IBC-NST and special subtype carcinoma” may be used. For this type of mixed IBC-NST and special subtype, it is recommended to report both elements present, as well as the overall percentage of the special subtype. For example, “mixed IBC-NST and invasive lobular carcinoma (30% lobular)”. Cancers with <10% special subtype should be classified as IBC-NST, while cancers with >90% specialized subtype should be classified as the special subtype.

Note that the 2019 WHO classification now considers carcinoma with medullary pattern, invasive carcinoma with neuroendocrine differentiation, carcinomas with pleomorphic and choriocarcinomatous patterns, tumours with melanocytic features, oncocytic, lipid-rich, glycogen-rich, clear cell, and sebaceous carcinomas as special morphological patterns of IBC-NST.[1] These tumours are considered morphological patterns of IBC-NST regardless of the extent of differentiation/pattern, and the 90% rule for special subtype is not applied to tumours showing any of these patterns.

Where no residual invasive carcinoma is present, for example if the invasive tumour has been removed entirely by a previous operation or biopsy sampling, the tumour characteristics identifiable in the prior diagnostic specimen should be used to fill out the synoptic report, with an explanatory note.

Table 1: Detailed Invasive Tumour Classification based on 2019 World Health Organization classification of breast tumours subsections.[1]

Descriptor	ICD-O codes[a]
Invasive Type for Pure or Mixed (include all types present if >10%)	
Main categories:	
No Special Type	
Invasive breast carcinoma of no special type (see 'a' below)	8500/3
Special Types:	
Invasive lobular carcinoma (see 'b' below)	8520/3
Tubular carcinoma	8211/3
Invasive Cribriform carcinoma	8201/3
Mucinous carcinoma	8480/3
Invasive micropapillary carcinoma	8507/3
Carcinoma with apocrine differentiation	8401/3
Metaplastic carcinoma (see 'c' below)	8575/3
WHO 2019 classification additional sub categories (use 'Other, specify')	
a. NST special patterns	
None	8500/3
Present	
medullary	
neuroendocrine differentiation	
pleomorphic	
choriocarcinomatous	
melanocytic features	
oncocytic	8290/3
lipid-rich	8314/3
glycogen-rich	8315/3
clear cell	
sebaceous carcinomas	8410/3
b. Lobular Sub-Type	8520/3
Classical	
Pleomorphic	
Solid	
Alveolar	
Tubulolobular	
Mixed sub-types	
c. Metaplastic carcinoma	8575/3
Low grade adenosquamous carcinoma	
Fibromatosis-like metaplastic carcinoma	
Squamous cell carcinoma	

Descriptor	ICD-O codes[a]
Spindle cell carcinoma/myoepithelial carcinoma	
Metaplastic carcinoma with mesenchymal differentiation (chondroid, osseous, other types of mesenchymal differentiation)	
Mixed metaplastic carcinoma	
d. Salivary gland-type and other rare tumours	
Mucinous cystadenocarcinoma	8470/3
Acinic cell carcinoma	8550/3
Adenoid cystic carcinoma	8200/3
Secretory carcinoma	8502/3
Mucoepidermoid carcinoma	8430/3
Polymorphous adenocarcinoma	8525/3
Tall cell carcinoma with reversed polarity	8509/3
e. Invasive papillary carcinomas	
Solid papillary carcinoma - invasive	8509/3
Invasive papillary carcinoma	8503/3
f. Neuroendocrine neoplasms	
Neuroendocrine tumour	8240/3
Neuroendocrine carcinoma	8246/3
g. Epithelial-myoepithelial tumours	
Malignant adenomyoepithelioma	8562/3

[a] These morphology codes are from the International Classification of Diseases for Oncology, third Edition, second revision (ICD-O-3.2).[3] Behaviour is coded /0 for benign tumours; /1 for unspecified, borderline, or uncertain behaviour; /2 for carcinoma in situ and grade III intraepithelial neoplasia; /3 for malignant tumours, primary site; and /6 for malignant tumours, metastatic site. Incorporates all relevant changes from the 5th edition Corrigenda, September 2020.

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References

1 WHO Classification of Tumours Editorial Board (ed) (2019). *WHO Classification of Tumours, Breast Tumours, 5th Edition*. IARC Publications, Lyon.

2 WHO Classification of Tumours Editorial Board (2020). *Breast Tumours, WHO Classification of Tumours, 5th Edition, Volume 2 - Corrigenda September 2020.* Available from: https://publications.iarc.fr/Book-And-Report-Series/Who-Classification-Of-Tumours/Breast-Tumours-2019 (Accessed 16th June 2021).

3 Fritz A, Percy C, Jack A, Shanmugaratnam K, Sobin LH, Parkin DM, Whelan SL and World Health Organization (2000). *International classification of diseases for oncology*, World Health Organization, Geneva.