HONG KONG MEDICAL JOURNAL 香港醫學雜誌

Supplementary material

Supplement to: W Yeo, YHY Chan, RCY Leung, et al. Expert consensus recommendations on the daily clinical use of pembrolizumab for early triple-negative breast cancer. Hong Kong Med J 2025;Epub 4 Dec 2025. https://doi.org/10.12809/hkmj2513054.

Supplementary Table 1. Clinical statements in the first-round voting that achieved consensus to reject*

		Median score	IQR
Topic 3: Neoadjuvant therapy regimens			
20.	Imaging should be performed prior to NAC, during the last cycle of the first part of the NAT regimen, and during the last cycle of the second part of the NAT regimen before definitive surgery.	5	2
Topic 4: Neoadjuvant chemotherapy alternative dosing regimens			
27.	A dose-dense schedule of epirubicin (or doxorubicin) plus cyclophosphamide may be used as an alternative to a 3-weekly schedule when pembrolizumab is administered in NAT.	5	3
Topic 5: Surgery			
31.	Early triple-negative breast cancer patients with clinically LN-positive disease at diagnosis who achieve clinical or radiologic complete response after NAT do not need to undergo ALND, provided SLND reveals a negative SLN.	5	2
Topic 6: Adjuvant treatment			
39.	For eTNBC patients with residual disease after NAT without pembrolizumab and with a known germline *BRCA1/2* mutation, offering a PARP inhibitor in combination with pembrolizumab in the adjuvant setting should be considered.	5	2
40.	Triple-negative breast cancer patients who are not candidates for NAT based on preoperative clinical staging (eg, DCIS, T1aN0, or T1bN0) but whose postoperative pathological staging upstages the tumour to a stage that would have warranted NAT (eg, due to occult positive nodes) should receive adjuvant chemotherapy. Although KEYNOTE-522 data only support perioperative use, the addition of pembrolizumab in these patients may be considered.	4	3

Abbreviations: ALND = axillary lymph node dissection; *BRCA1/2* = BReast CAncer gene 1/2; DCIS = ductal carcinoma in situ; eTNBC = early triple-negative breast cancer; IQR = interquartile range; LN = lymph node; N = nodal; NAC = neoadjuvant chemotherapy; NAT = neoadjuvant therapy; PARP = poly (ADP-ribose) polymerase; SLN = sentinel lymph node; SLND = sentinel lymph node dissection; T = tumour

* Statements that were discussed and revoted in the second round

Supplementary Table 2. Summary of all clinical statements in the second-round voting

		Median score	IQR
Topic 2: General patient selection for neoadjuvant therapy			
12.	NAC can be considered in TNBC patients with cT1c and cN0 disease, as per NCCN Guidelines.	5	0
12a.	NAC can be considered in TNBC patients with cT1c and cN0 disease.	5	0
Topic 3: Neoadjuvant therapy regimens			
17[*].	The NCCN Guidelines support the administration of NAC in cT1c cN0 patients; however, data remain limited because this group was excluded from the KEYNOTE-522 trial. The KEYNOTE-522 regimen may nevertheless be considered.	4.5	1
20[† ‡].	Imaging should be performed prior to NAC, during the last cycle of the first part of the NAT regimen, and during the last cycle of the second part of the NAT regimen before definitive surgery.	2	0.25
Topic 4: Neoadjuvant chemotherapy alternative dosing regimens			
24[*].	The 3-weekly paclitaxel regimen is indicated as an alternative for early breast cancer (unspecified clinical staging) patients, either as NAT or AT, according to the NHS London Cancer Alliance. Therefore, based on patient and disease factors, physicians can choose 3-weekly paclitaxel as an alternative to weekly paclitaxel when administering pembrolizumab to eTNBC patients.	3	1
27[†].	A dose-dense schedule of epirubicin (or doxorubicin) plus cyclophosphamide may be used as an alternative to a 3-weekly schedule when pembrolizumab is administered in NAT.	2	1
Topic 5: Surgery			
28[§].	All eTNBC patients with clinical TNM stage I or stage II disease before NAT, without other contraindications to lumpectomy, should be offered BCS as an option before starting treatment.	*The statement was removed by panellists*	
31[†].	Early triple-negative breast cancer patients with clinically LN-positive disease at diagnosis who achieve clinical or radiologic complete response after NAT do not need to undergo ALND, provided SLND reveals a negative SLN.	2	1
Topic 6: Adjuvant treatment			

37[‖].	For eTNBC patients with residual disease after NAT, capecitabine in combination with pembrolizumab may be offered in the adjuvant setting, considering the improved disease-free survival observed among TNBC patients with residual disease who received adjuvant capecitabine versus those who did not, according to the CREATE-X trial.	5	1
38[*].	For eTNBC patients with residual disease after NAT with pembrolizumab and a known germline *BRCA1/2* mutation, offering a PARP inhibitor in combination with pembrolizumab in the adjuvant setting should be considered.	4.5	1
39[†].	For eTNBC patients with residual disease after NAT without pembrolizumab and with a known germline *BRCA1/2* mutation, offering a PARP inhibitor in combination with pembrolizumab in the adjuvant setting should be considered.	2	1
40[†].	Triple-negative breast cancer patients who are not candidates for NAT based on preoperative clinical staging (eg, DCIS, T1aN0, or T1bN0) but whose postoperative pathological staging upstages the tumour to a stage that would have warranted NAT (eg, due to occult positive nodes) should receive adjuvant chemotherapy. Although KEYNOTE-522 data only support perioperative use, the addition of pembrolizumab in these patients may be considered.	1	1

Abbreviations: ALND = axillary lymph node dissection; AT = adjuvant therapy; BCS = breast conserving surgery; *BRCA1/2* = BReast CAncer gene 1/2; cN = clinical nodal stage; cT = clinical primary tumour stage; DCIS = ductal carcinoma in situ; eTNBC = early triple-negative breast cancer; LN = lymph node; N = nodal; NAC = neoadjuvant chemotherapy; NAT = neoadjuvant therapy; NCCN = National Comprehensive Cancer Network; NHS = National Health Service; PARP = poly (ADP-ribose) polymerase; SLN = sentinel lymph node; SLND = sentinel lymph node dissection; T = tumour; TNBC = triple-negative breast cancer; TNM = tumour-node-metastasis

[*] Statements that achieved a consensus to accept in phase 1 but failed to reach a consensus in phase 2

[†] Statement that did not reach a consensus in phase 1 but achieved a consensus to reject in phase 2

[‡] Statement was revised based on the discussion during phase 2. Voting for the statement was conducted in four parts, with the first three votes for sub-statements 20a, 20b, and 20c, and the final vote for the overall statement. Details of sub-statements were discussed in the consensus meeting

[§] Statement was discussed, but voting was skipped because the phrasing was deemed unclear

[‖] From the presentation during the meeting, it was assumed that patients were treated with pembrolizumab plus chemotherapy in the neoadjuvant setting