PACLitaxel Monotherapy 80mg/m^2 Day 1, 8, 15 and 22 – 28 Day

INDICATIONS FOR USE:

INDICATION	ICD10	Regimen Code	HSE approved reimbursement status*
Treatment of metastatic breast carcinoma (mBC) in patients who have either failed or are not candidates for standard, anthracycline-containing therapy[i]	C50	00226a	N/A
Second-line chemotherapy for metastatic ovarian cancer after failure of standard, platinum-containing therapy[i]	C56	00226b	N/A
Relapsed or refractory small cell lung cancer[i]	C34	00226d	N/A
Second line chemotherapy for metastatic bladder cancer[i]	C67	00226e	N/A

* This applies to post 2012 indications.

TREATMENT:

The starting dose of the drugs detailed below may be adjusted downward by the prescribing clinician, using their independent medical judgement, to consider each patients individual clinical circumstances.

PACLitaxel is administered on day 1,8,15 and 22 of a 28 day treatment cycle until disease progression or unacceptable toxicity develops.
PACLitaxel may be administered on day 1, 8 and 15 of a 28 day treatment cycle at the discretion of the prescribing consultant.

Facilities to treat anaphylaxis MUST be present when systemic anti-cancer therapy (SACT) is administered.

Day	Drug	Dose	Route	Diluent & Rate	Cycle
1,8,15,22	PACLitaxel	80mg/m^2	IV infusion	250mL 0.9% NaCl over 60 minutes	Every 28 days
PACLitaxel must be supplied in non-PVC containers and administered using non-PVC giving sets and through an in-line 0.22 µm filter with a microporous membrane.					
PACLitaxel should be diluted to a concentration of 0.3-1.2mg/mL.					

Note: Administration volumes and fluids have been standardised to facilitate electronic prescribing system builds.

ELIGIBILITY:

- Indications as above
- ECOG status 0-2

EXCLUSIONS:

- Hypersensitivity to PACLitaxel or to any of the excipients.
- Breast feeding
- Baseline neutrophil count < $1.5x10^9$ cells/L
- Severe hepatic impairment

PRESCRIPTIVE AUTHORITY:

The treatment plan must be initiated by a Consultant Medical Oncologist.

TESTS:

Baseline tests:

- FBC, renal and liver profile

Regular tests:

- FBC, renal and liver profile prior to each treatment
- Day 8: FBC
- Assessment of peripheral neuropathy status as clinically indicated

Disease monitoring:

Disease monitoring should be in line with the patient's treatment plan and any other test/s as directed by the supervising Consultant.

DOSE MODIFICATIONS:

- Any dose modification should be discussed with a Consultant

Haematological:

Table 1: Recommended dose modifications for PACLitaxel for haematological toxicity

ANC ($x10^9$/L)		Platelets	Dose	Dose after neutropenic sepsis
≥ 1	and	> 90	80mg/m^2	65mg/m^2
1	or	70-90	65mg/m^2	50mg/m^2
< 1	or	< 70	Delay and reduce next dose to 65mg/m^2 or add G-CSF	Delay
Patients who cannot tolerate treatment after 2 dose reductions or require a treatment delay of greater than 2 weeks, should discontinue treatment.				

Renal and Hepatic Impairment:

Table 2: Recommended dose modification for PACLitaxel in renal and hepatic impairment

Renal Impairment	Hepatic Impairment			
No need for dose adjustment is expected. Haemodialysis : No need for dose adjustment is expected.	**Transaminases**		**Bilirubin**	**Dose**
	< 10 x ULN	and	≤ 1.25 x ULN	No dose reduction
	< 10 x ULN	and	1.26-2 x ULN	75% of original dose
	< 10 x ULN	and	2.01-5 x ULN	50% of original dose
	≥10 x ULN	and /or	>5 x ULN	Contraindicated
Renal and hepatic dose modifications from Giraud et al 2023				

Management of adverse events:

Table 3: Recommended dose modification of PACLitaxel for adverse events

Adverse reactions	Dose
Grade 2 motor or sensory neuropathy	Decrease dose by 10mg/m^2
All other grade 2 non-haematological toxicity	Hold treatment until toxicity resolves to ≤ grade 1. Decrease subsequent doses by 10mg/m$^{2.}$
≥ Grade 3 reaction	Discontinue
Patients who cannot tolerate treatment after 2 dose reductions should be discussed with treating clinician regarding continuation of treatment.	

SUPPORTIVE CARE:

EMETOGENIC POTENTIAL:

As outlined in NCCP Classification Document for Systemic Anti-Cancer Therapy (SACT) Induced Nausea and Vomiting - Available on the NCCP website

PACLItaxel: Low (Refer to local policy).

For information:
Within NCIS regimens, antiemetics have been standardised by Medical Oncologists and Haemato-oncologists and information is available in the following documents:

- NCCP Supportive Care Antiemetic Medicines for **Inclusion in NCIS** (Medical Oncology) - Available on the NCCP website
- NCCP Supportive Care Antiemetic Medicines for **Inclusion in NCIS** (Haemato-oncology) - Available on the NCCP website

PREMEDICATIONS:

- All patients must be premedicated with corticosteroids, antihistamines, and H_2 antagonists prior to first dose of PACLitaxel treatment.
- The H2 antagonist, famotidine , can potentially be omitted from the pre-medication requirements for PACLitaxel but the risk of hypersensitivity with this approach is unknown.
- Caution is advised particularly for patients receiving PACLitaxel every 3 weeks. It is recommended that if famotidine is omitted that patients are monitored closely for any signs of hypersensitivity. Any hypersensitivity should be managed as per local policy.
- Where a patient experiences hypersensitivity, consider use of alternative H2 antagonists **(refer to local policy)**

Table 4: Suggested premedications prior to treatment with PACLitaxel

Day of treatment	Drug	Dose	Administration prior to PACLitaxel
Day 1	dexAMETHasone[a]	8mg IV	30 minutes
Day 1	Chlorphenamine	10mg IV	30 minutes
Day 1	Famotidine	20mg IV	30 minutes
Day 8[b] and thereafter	dexAMETHasone[a]	None	
Day 8 and thereafter	Chlorphenamine	10mg IV	30 minutes

Day 8 and thereafter	Famotidine[c]	20mg IV	30 minutes
[a]Dose of dexAMETHasone may be altered, in the event of hypersensitivity reaction, to 20 mg of dexAMETHasone orally 12 hr and 6 hr prior to re-challenge with PACLitaxel according to consultant guidance.			
[b]Dose of dexAMETHasone may be added from day 8 if increased risk or previous hypersensitivity reaction according to consultant guidance.			
[c]Dose of famotidine may be omitted in the absence of hypersensitivity reaction according to consultant guidance.			

OTHER SUPPORTIVE CARE:

- Myalgias and arthralgias may occur with PACLitaxel. Analgesic cover should be considered.

ADVERSE EFFECTS:

- Please refer to the relevant Summary of Product Characteristics for details.

DRUG INTERACTIONS:

- Current SmPC and drug interaction databases should be consulted for information.

REFERENCES:

1. Seidman AD, Hudis CA, Albanel J, Tong W, Tepler I, Currie V, et al. Dose-dense therapy with weekly 1-hour paclitaxel infusions in the treatment of metastatic breast cancer. J Clin Oncol. 1998:16:3353-61.
2. Perez EA, Vogel CL, Irwin DH, et al. Multicenter phase II trial of weekly paclitaxel in women with metastatic breast cancer. J Clin Oncol 2001; 19 (22):4216-23.
3. Markman M, Blessing J et al. Phase II trial of weekly paclitaxel (80 mg/m^2) in platinum and paclitaxel-resistant ovarian and primary peritoneal cancers: a Gynecologic Oncology Group study. Gynecol Oncol. 2006;101(3):436-40
4. Sparano JA, Wang M, et al. Weekly paclitaxel in the adjuvant treatment of breast cancer. N Engl J Med. 2008; 358(16):1663-71
5. Hironaka S Zenda S et al. Weekly paclitaxel as second-line chemotherapy for advanced or recurrent gastric cancer Gastric Cancer 2006;9: 14–18
6. Kodera Y, Ito S et al. A Phase II Study of Weekly Paclitaxel as Second-line Chemotherapy for Advanced Gastric Cancer (CCOG0302 Study). Anticancer Research 2007; 27: 2667-2672.
7. Yamamoto N et al. Phase II study of weekly paclitaxel for relapsed and refractory small cell lung cancer. Anticancer Res. 2006 Jan-Feb; 26 (1B):777-81.
8. Sideris S et al. Efficacy of weekly paclitaxel treatment as a single agent chemotherapy following first-line cisplatin treatment in urothelial bladder cancer. Mol Clin Oncol. 2016 Jun; 4(6): 1063–1067
9. Uptodate infusion reactions to systemic chemotherapy available at https://www.uptodate.com/contents/infusion-reactions-to-systemic-chemotherapy#H37
10. Quock J et al. Premedication strategy for weekly paclitaxel. Cancer investigation. Volume 20, 2002 issue 5-6
11. Giraud E L, Lijster B D, et al. Dose recommendations for anticancer drugs in patients with renal or hepatic impairment: an update. Available at: https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(23)00216-4/fulltext

12. NCCP Classification Document for Systemic Anti- Cancer Therapy (SACT) Induced Nausea and Vomiting V6 2025. Available at: https://www.hse.ie/eng/services/list/5/cancer/profinfo/chemoprotocols/nccp-classification-document-for-systemic-anti-cancer-therapy-sact-induced-nausea-and-vomiting.pdf
13. PACLitaxel. Summary of Product Characteristics. Accessed February 2025. Available at: https://www.hpra.ie/img/uploaded/swedocuments/Licence_PA2059-050-001_02082019150408.pdf

Version	Date	Amendment	Approved By
1	29/04/2015		Dr Maccon Keane
2	14/06/2017	Additions of indications for Small Cell Lung Cancer and for metastatic bladder Cancer. Clarified dosing in haematological toxicity	Prof Maccon Keane
3	16/03/2018	Updated diluents recommendations and dosing in haematological toxicity	Prof Maccon Keane
4	24/09/2019	Amended regimen name Clarified treatment cycle details Standardisation of administration times for pre-medications for PACLitaxel	Prof Maccon Keane
5	12/02/2020	Standardised table for suggested premedications prior to treatment	Prof Maccon Keane
6	30/11/2020	Removal of gastric cancer indication due to new regimen 621 - Paclitaxel 80mg/m^2 Monotherapy Day 1, 8, 15 – 28 Day. Updated premedication recommendations.	Prof Maccon Keane
7	22/09/2023	Updated premedications recommendations	Prof Maccon Keane
8	14/04/2025	Regimen reviewed. Updated regular tests section. Updated Table 1 dose modifications for PACLitaxel for haematological toxicity. Updated renal and hepatic dose modifications table to align with Giraud et al 2023. Updated regimen in line with NCCP standardisation.	Prof Maccon Keane

Comments and feedback welcome at oncologydrugs@cancercontrol.ie.

[i] This regimen is outside its licensed indication in Ireland. Patients should be informed of the unlicensed nature of this indication and consented to treatment in line with the hospital's policy on the use of unlicensed medication and unlicensed or "off label" indications. Prescribers should be aware of their responsibility in communicating any relevant information to the patient and also in ensuring that the unlicensed or "off label" indication has been acknowledged by the hospital's Drugs and Therapeutics Committee, or equivalent, in line with hospital policy.