

**Regimen Monograph**

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**A - Regimen Name**

# NPAC Regimen

nab-PACLitaxel

**Disease Site** Breast**Intent** Palliative**Regimen Category** **Evidence-Informed :**

Regimen is considered appropriate as part of the standard care of patients; meaningfully improves outcomes (survival, quality of life), tolerability or costs compared to alternatives (recommended by the Disease Site Team and national consensus body e.g. pan-Canadian Oncology Drug Review, pCODR). Recommendation is based on an appropriately conducted phase III clinical trial relevant to the Canadian context OR (where phase III trials are not feasible) an appropriately sized phase II trial. Regimens where one or more drugs are not approved by Health Canada for any indication will be identified under Rationale and Use.

**Rationale and Uses** For the treatment of metastatic breast cancer in patients who cannot tolerate paclitaxel or docetaxel therapy (acute reactions to cremophor/polysorbate 80 or severe toxicity to taxane/premedication)**Supplementary Public Funding** [nab-PACLitaxel](#)  
New Drug Funding Program (Nab-Paclitaxel - Metastatic Breast Cancer)  
([NDFP Website](#))[back to top](#)

## B - Drug Regimen

**Do not substitute for or with other paclitaxel formulations.**

[nab-PACLitaxel](#)

260 mg /m<sup>2</sup>

IV

Day 1\*

\* Some centres use a q28 day schedule of 100mg/m<sup>2</sup> or 150mg/m<sup>2</sup> IV on days 1, 8, 15, as documented in a phase II study by Gradishar et al. Better tumour response was observed with nab-paclitaxel 100 or 150 mg/m<sup>2</sup> every three out of four weeks than with docetaxel 100 mg/m<sup>2</sup> q3w, and with less grade 4 neutropenia.

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## C - Cycle Frequency

**REPEAT EVERY 21 DAYS**

Until disease progression or unacceptable toxicity

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## D - Premedication and Supportive Measures

**Antiemetic Regimen:** Low

**Other Supportive Care:**

Also refer to [CCO Antiemetic Recommendations](#).

**Screen for hepatitis B virus in all cancer patients starting systemic treatment.** Refer to the [hepatitis B virus screening and management](#) guideline.

No premedication to prevent hypersensitivity is required.

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**E - Dose Modifications**

Doses should be modified according to the protocol by which the patient is being treated.

**Do not substitute for or with other paclitaxel formulations.**

Nab-paclitaxel should only be administered if neutrophils  $\geq 1.5 \times 10^9/L$  and platelets  $\geq 100 \times 10^9/L$  on day 1 of each treatment cycle.

**Dosage with toxicity**

Worst Toxicity / Counts ( $\times 10^9/L$ ) in previous cycle	Nab-paclitaxel Dose ( $mg/m^2$ ) Every 3 Weeks		
	First occurrence	Second occurrence	Third Occurrence
ANC $< 0.5 \geq 7$ days or Febrile neutropenia or Grade 4 platelets or bleeding	*220 $mg/m^2$	*180 $mg/m^2$	Discontinue
Grade 3 or 4 sensory neuropathy or other grade 3 related organ toxicity	*220 $mg/m^2$ OR consider discontinuing for Grade 4 neurotoxicity	*180 $mg/m^2$ OR consider discontinuing for Grade 4 neurotoxicity	Discontinue
Other grade 4 related organ toxicity; severe hypersensitivity, or any cystoid macular edema	Discontinue		
Pneumonitis	Hold and investigate; discontinue if confirmed	n/a	
* Do not retreat until ANC $\geq 1.5 \times 10^9/L$ , platelets $\geq 100 \times 10^9/L$ and other toxicity $\leq$ grade 2.			

**Hepatic Impairment**

Patients with hepatic impairment may be at increased risk of myelosuppression and should be closely monitored.

<b>Bilirubin</b>		<b>AST</b>	<b>Nab-paclitaxel* (% previous dose - suggested)</b>
>1 to ≤ 1.5 x ULN	and	≤ 10 x ULN	100%
>1.5 to ≤ 5 x ULN	and	≤ 10 x ULN	↓ to 80%**
> 5 x ULN	or	> 10 x ULN	Discontinue (has not been studied).

\* Based on clinical judgment. Patients with elevated baseline bilirubin were excluded from clinical trials. Less conservative adjustments can be considered if hepatic changes are secondary to metastases rather than hepatic cirrhosis or hepatitis.

\*\* Reduced dose may be escalated to 100% if treatment is tolerated for at least 2 cycles at the reduced dose.

**Renal Impairment**

<b>Creatinine Clearance (mL/min)</b>	<b>Nab-paclitaxel* (% previous dose - suggested)</b>
≥ 30 to < 90	100%
< 30	Discontinue (has not been studied).

\* Based on clinical judgment. Patients with elevated baseline creatinine were excluded from clinical trials.

**Dosage in the Elderly**

No dose adjustment is required. Patients age 65 years or older may have higher incidence of neutropenia in cycle 1. Patients aged 65 and older who received nab-paclitaxel monotherapy for metastatic breast cancer had a higher incidence of epistaxis, diarrhea, dehydration, fatigue and peripheral edema.

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**F - Adverse Effects**

Refer to [nab-PACLitaxel](#) drug monograph(s) for additional details of adverse effects.

Very common (≥ 50%)	Common (25-49%)	Less common (10-24%)	Uncommon (< 10%), but may be severe or life-threatening
<ul style="list-style-type: none"> <li>• Alopecia</li> <li>• Myelosuppression +/- infection, bleeding (may be severe)</li> <li>• Sensory neuropathy (may be severe)</li> </ul>	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Musculoskeletal pain</li> <li>• Increased LFTs (may be severe)</li> <li>• ECG changes</li> <li>• Nausea / vomiting</li> <li>• Diarrhea (may be severe)</li> </ul>	<ul style="list-style-type: none"> <li>• Eye disorders</li> <li>• Cough / dyspnea</li> <li>• Constipation</li> <li>• Anorexia</li> <li>• Increased creatinine (may be severe)</li> <li>• Edema</li> </ul>	<ul style="list-style-type: none"> <li>• Injection site reaction</li> <li>• Hypersensitivity</li> <li>• Cardiotoxicity</li> <li>• Arrhythmia</li> <li>• Autonomic neuropathy</li> <li>• Cranial neuropathy</li> <li>• Arterial / venous thromboembolism</li> <li>• Hemolytic uremic syndrome / TTP</li> <li>• GI obstruction/ perforation</li> <li>• Renal failure</li> <li>• Pancreatitis</li> <li>• Pneumonitis</li> <li>• Lung fibrosis</li> <li>• Keratitis / cystoid macular edema</li> <li>• Optic neuritis</li> </ul>

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**G - Interactions**

Refer to [nab-PACLitaxel](#) drug monograph(s) for additional details.

No drug interaction studies have been conducted with nab-paclitaxel, but are likely to be similar to those reported for [paclitaxel](#) (refer to the paclitaxel drug monograph).

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## H - Drug Administration and Special Precautions

Refer to [nab-PACLitaxel](#) drug monograph(s) for additional details.

### **Administration**

- Refer to the product monograph for full instructions on reconstitution.
- The reconstituted suspension should be milky and homogenous without visible particulates.
- Avoid shaking drug suspension in order to minimize foaming.
- No further dilution is required after reconstitution. Transfer reconstituted drug to an empty, sterile IV PVC or non-PVC infusion bag.
- Infuse intravenously over 30 minutes. Slower infusion rates may increase the likelihood of infusion-related reactions.
- DEHP-free containers or administration sets may be used but are not required.
- Do not admix with other drugs.
- Use of syringes and IV bags containing silicone oil as lubricant may cause formation of proteinaceous strands. If strands are observed by visual inspection of IV bag, administer reconstituted suspension through filter of at least 15 µm pore size. If this is not possible, discard the product.
- Store unopened vial at 20-25°C in its original carton; protect from light.

### **Contraindications**

- Patients who have a hypersensitivity to this drug or any of its components (such as albumin) in the formulation or container
- Patients with baseline ANC of  $< 1.5 \times 10^9/L$  on day 1 of each treatment cycle

### **Other Warnings / Precautions**

- Do not administer nab-paclitaxel to patients with platelets  $< 100 \times 10^9/L$ .
- The use of nab-paclitaxel in patients exhibiting hypersensitivity to paclitaxel or human albumin has not been studied.
- Patients with elevated baseline bilirubin or elevated baseline creatinine were excluded from clinical trials.

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- The use of albumin-containing solutions is associated with a remote risk of viral transmission, including CJD.
  - Radiation recall and pneumonitis have been reported in patients with concurrent radiotherapy.
  - Nab-paclitaxel is not recommended for use in patients with a history of interstitial lung disease, multiple allergies, progressive dyspnea or unproductive cough (cases of serious pneumonitis were reported in those treated with combination nab-paclitaxel and gemcitabine).
  - Caution is recommended prior to driving or operating machinery if fatigue, weakness or dizziness are present.

### **Pregnancy / Lactation**

- This regimen is not recommended for use in pregnancy. Adequate contraception should be used by patients and their partners while on treatment and after the last treatment dose. Recommended methods and duration of contraception may differ depending on the treatment. Refer to the drug monograph(s) for more information.
- Breastfeeding is not recommended during this treatment and after the last treatment dose. Refer to the drug monograph(s) for recommendations after the last treatment dose (if available).
- Fertility effects: Probable

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## I - Recommended Clinical Monitoring

Treating physicians may decide to monitor more or less frequently for individual patients but should always consider recommendations from the product monograph.

Refer to the [hepatitis B virus screening and management](#) guideline for monitoring during and after treatment.

### Recommended Clinical Monitoring

- CBC; Baseline and before each dose
- Liver function tests; Baseline, before each cycle and as clinically indicated
- Renal function tests; Baseline and as clinically indicated
- ECG monitoring especially in patients who have cardiac risk factors; Baseline and as clinically indicated
- Clinical toxicity assessment of fatigue, neuropathy, infection and bleeding, hypersensitivity, musculoskeletal, GI, ophthalmic, thromboembolism, local reactions and pneumonitis; At each visit
- Grade toxicity using the current [NCI-CTCAE \(Common Terminology Criteria for Adverse Events\) version](#)

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## J - Administrative Information

Approximate Patient Visit	1 hour
Pharmacy Workload (average time per visit)	32.929 minutes
Nursing Workload (average time per visit)	35 minutes

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## K - References

Gradishar WJ, Tjulandin S, Davidson N, et al. Phase III trial of nanoparticle albumin-bound paclitaxel compared with polyethylated castor oil-based paclitaxel in women with breast cancer. *J Clin Oncol*. 2005;23:7794-803.

Gradishar WJ, Krasnojon D, Cheporov S, et al. Significantly longer progression-free survival with nab-paclitaxel compared with docetaxel as first-line therapy for metastatic breast cancer. *J Clin Oncol* 2009; 27: 3611-9.

Gradishar WJ, Krasnojon D, Cheporov S, et al. Phase II trial of nab-paclitaxel compared with docetaxel as first-line chemotherapy in patients with metastatic breast cancer: final analysis of overall survival. *Clin Breast Cancer* 2012;12(5):313-21.

Nab-paclitaxel drug monograph, Cancer Care Ontario.

**November 2023** Modified Pregnancy/breastfeeding section

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## M - Disclaimer

### **Regimen Abstracts**

*A Regimen Abstract is an abbreviated version of a Regimen Monograph and contains only top level information on usage, dosing, schedule, cycle length and special notes (if available). It is intended for healthcare providers and is to be used for informational purposes only. It is not intended to constitute or be a substitute for medical advice, and all uses of the Regimen Abstract are subject to clinical judgment. Such information is provided on an "as-is" basis, without any representation, warranty, or condition, whether express, or implied, statutory or otherwise, as to the information's quality, accuracy, currency, completeness, or reliability, and Cancer Care Ontario disclaims all liability for the use of this information, and for any claims, actions, demands or suits that arise from such use.*

*Information in regimen abstracts is accurate to the extent of the ST-QBP regimen master listings, and has not undergone the full review process of a regimen monograph. Full regimen monographs will be published for each ST-QBP regimen as they are developed.*

### **Regimen Monographs**

Refer to the [New Drug Funding Program](#) or [Ontario Public Drug Programs](#) websites for the most up-to-date public funding information.

*The information set out in the drug monographs, regimen monographs, appendices and symptom management information (for health professionals) contained in the Drug Formulary (the "Formulary") is intended for healthcare providers and is to be used for informational purposes only. The information is not intended to cover all possible uses, directions, precautions, drug interactions or adverse effects of a particular drug, nor should it be construed to indicate that use of a particular drug is safe, appropriate or effective for a given condition. The information in the Formulary is not intended to constitute or be a substitute for medical advice and should not be relied upon in any such regard. All*

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*The format and content of the drug monographs, regimen monographs, appendices and symptom management information contained in the Formulary will change as they are reviewed and revised on a periodic basis. The date of last revision will be visible on each page of the monograph and regimen. Since standards of usage are constantly evolving, it is advised that the Formulary not be used as the sole source of information. It is strongly recommended that original references or product monograph be consulted prior to using a chemotherapy regimen for the first time.*

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