Regimen Monograph

Regimen Name | Drug Regimen | Cycle Frequency | Premedication and Supportive Measures | Dose Modifications | Adverse Effects | Interactions | Drug Administration and Special Precautions | Recommended Clinical Monitoring | Administrative Information | References | Other Notes | Disclaimer

A - Regimen Name

VAND Regimen

Vandetanib

Disease Site

Endocrine
Thyroid

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 symptomatic and/or progressive medullary thyroid cancer in adult patients with unresectable locally advanced or metastatic disease

(Vandetanib can only be prescribed and dispensed by physicians and pharmacies under certification by the Caprelsa® restricted distribution program.)

Supplementary Public Funding

vanDETanib
Exceptional Access Program (vanDETanib - Monotherapy for symptomatic and/or progressive medullary thyroid cancer (MTC), with specific criteria)

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B - Drug Regimen

vanDETanib	300 mg	PO	Daily

(Outpatient prescription in 300 mg or 100 mg tablets)

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C - Cycle Frequency

CONTINUOUS TREATMENT

Until disease progression, no evidence of further response, or unacceptable toxicity.

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D - Premedication and Supportive Measures

Antiemetic Regimen: Minimal – No routine prophylaxis; PRN recommended

Other Supportive Care:

- Patients taking vandetanib have a potential for photosensitivity upon sun exposure. Patients should wear protective clothing and/or sunblock (with an SPF of at least 30) during vandetanib treatment and for 4 months after the last dose.
- Patients should be provided with loperamide and instructions on how to manage diarrhea.

Also refer to CCO Antiemetic Recommendations.

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E - Dose Modifications

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

Do not start treatment until electrolytes abnormalities have been corrected, especially potassium, magnesium and calcium.

Hold vandetanib for at least 1 month before elective surgery. Do not administer vandetanib for at least 2 weeks after major surgery and until adequate wound healing.

Dosage with toxicity

Dose levels: 300 mg daily; 200 mg daily; 100 mg daily

Toxicity	Action for Vandetanib
Grade 1 or 2 skin reactions	Treat symptomatically or by ↓ dose
Grade 3 or 4 skin toxicity	Treat symptomatically and hold until ≤ grade 1, then ↓ 1 dose level or Discontinue if Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis or grade 4
Grade 3 or 4 hypertension	Hold; control blood pressure medically. Consider ↓ dose
Grade 1 or 2 diarrhea	Treat symptomatically with loperamide and hydration.
Grade 3 or 4 diarrhea	Hold until grade 1, then ↓ 1 dose level.
Hemoptysis (≥ 2.5mL)	Hold until resolved. Consider discontinuing
QTcF ≥ 500 ms	Hold until QTcF <450 ms then ↓ 1 dose level; consider cardiology consult
Radiological changes suggestive of pneumonitis	Investigate. If mild may continue treatment ± corticosteroids / antibiotics during investigation; otherwise hold. If pneumonitis confirmed, discontinue.
Signs of symptoms of hypothyroidism	Adjust thyroid replacement therapy. Monitor TSH.
Grade 3 or 4 LFTs	Hold until grade 1. Consider ↓ dose.
• Severe arterial thromboembolism • Severe heart failure • RPLS • Severe bleeding	Discontinue
Other grade 3 or 4 related organ toxicity	Hold until grade 1, then ↓ 1 dose level.

Hepatic Impairment

Not recommended for use in patients with moderate and severe hepatic impairment (Child Pugh B and C). Limited data exist in patients with bilirubin >1.5 x ULN.

Renal Impairment

Vandetanib is not recommended for use in patients with severe renal impairment (clearance below 30 mL/min).

Exposure is increased in patients with renal impairment. The patient and the QTcF must be closely monitored.

Creatinine Clearance (mL/min)	Starting Daily Dose
≥ 50	300 mg
30-49	200 mg
<30	Not recommended for use

Dosage in the Elderly

No adjustment in starting dose is required. Limited data in patients over 75 years of age.

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F - Adverse Effects

Refer to vandetanib 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
• Diarrhea (may be severe) • ↑ LFTs • Abnormal electrolytes • Hypothyroidism	• Hypertension (may be severe) • Rash (may be severe) • Nausea/vomiting • Headache	• Myelosuppression ± infection, bleeding • Prolonged QT interval (may be severe) • Photosensitivity • Anorexia, weight loss • Abdominal pain • Dyspepsia • Fatigue • Insomnia • Nephrotoxicity (may be severe) • Cough	• Corneal opacity • Arterial or venous thromboembolism • Artery aneurysm / dissection • Hemorrhage • Cardiotoxicity • Pneumonitis • PRES • Pancreatitis • GI perforation • Arrhythmia

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G - Interactions

Refer to vandetanib drug monograph(s) for additional details

- Avoid drugs that may prolong QT; close QT monitoring if these drugs are co-administered with vandetanib
- Avoid concurrent use of CYP3A4 inducers or CYP3A4 inhibitors; consider alternative drugs
- Caution with P-gp and OCT2 substrates

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H - Drug Administration and Special Precautions

Refer to vandetanib drug monograph(s) for additional details

Administration:

- Vandetanib may be taken with or without meals
- Avoid products and juices containing grapefruit, star fruit, pomegranate, Seville oranges or other similar fruits that can inhibit CYP3A4.
- Take the dose at about the same time each day. Swallow whole; do not crush or chew.
- If the patient has difficulty swallowing the tablet(s), may mix it with water as follows:
  - a) Put the whole tablet into half a glass (50mL) of non-carbonated water. Do not use other liquids.
  - b) Stir the water until the tablet disintegrates. This may take about 10 minutes.
  - c) Drink the mixture immediately.
  - d) Rinse the empty glass well with another half a glass of water and drink it.
  - (This liquid mixture can also be given through nasogastric or gastrostomy tubes.)
- If a dose is missed, give it if it is within 12 hours from the missed dose, otherwise skip and give the next dose as scheduled.
- Store vandetanib at room temperature.

Contraindications:

- Congenital long QT syndrome or with a persistent QTcF of ≥500ms.
- Uncorrected hypokalemia, hypomagnesemia or hypocalcemia
- Uncontrolled hypertension or heart failure
- Patients with a recent history of hemoptysis of ≥ half teaspoon of red blood, or patients with moderate or severe hepatic impairment
- Patients who have a hypersensitivity to this drug or any of its components

Other Warnings/Precautions:

- Do not give vandetanib to patients with a history of Torsade de Pointes (unless all risk factors have been corrected), bradyarrhythmias or uncompensated heart failure.
- Patients must avoid sun exposure for 4 months after the last dose of vandetanib
- Vandetanib can only be prescribed or dispensed by physicians and pharmacies who have been certified under the Caprelsa® restricted distribution program. Patients must enrol and comply with the requirements of this program before receiving vandetanib.

Pregnancy and Lactation:

- Vandetanib is not recommended for use in pregnancy. Adequate contraception should be used by both sexes during treatment, and for at least 3 months (for women) and 2 months (for men) after the last vandetanib dose.
- Breastfeeding is not recommended.

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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.

Recommended Clinical Monitoring

- QTcF and blood pressure; at baseline, 2-4 weeks and 8-12 weeks during treatment, and q3 months thereafter, also after dose adjustments
- Electrolytes (including calcium, potassium, magnesium) and TSH; at baseline, 2-4 weeks and 8-12 weeks during treatment, then q3 months thereafter, also after dose adjustments
- Liver function tests; baseline and regular
- Clinical toxicity assessment for rash, wound healing, diarrhea, hypertension, arterial/venous thromboembolism, bleeding, neurologic, cardiovascular, ophthalmic and respiratory side effects; at each visit

- Grade toxicity using the current NCI-CTCAE (Common Terminology Criteria for Adverse Events) version

Suggested Clinical Monitoring

- Renal function tests; baseline and regular

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J - Administrative Information

Outpatient prescription for home administration

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K - References

Vandetanib drug monograph, Cancer Care Ontario.

Wells SA Jr, Robinson BG, Gage RF, et al. Vandetanib in patients with locally advanced or metastatic medullary thyroid cancer: a randomized, double-blind Phase III Trial. J Clin Oncol 2012;30(2):134-41.

November 2023 Removed PEBC guideline link

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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 uses of the Formulary are subject to clinical judgment and actual prescribing patterns may not follow the information provided in the Formulary.

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.

Some Formulary documents, such as the medication information sheets, regimen information sheets and symptom management information (for patients), are intended for patients. Patients should always consult with their healthcare provider if they have questions regarding any information set out in the Formulary documents.

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