

## Sorafenib (for metastatic renal cell carcinoma)

### Product:

SORAFENIB (Nexavar®) 200mg tablet

### Class of drugs:

Multi-kinase inhibitor

### Indication:

Treatment of metastatic renal cell carcinoma

### Manufacturer:

Bayer Inc.

## CED Recommendation

The CED recommended that sorafenib (Nexavar) be funded through the Exceptional Access Program for the second-line treatment of metastatic renal cell carcinoma after failure of cytokine therapy, according to specific criteria. Although there were concerns regarding cost-effectiveness, the CED noted that sorafenib (Nexavar) has been shown to provide clinical efficacy.

## Executive Officer Decision

Based on the CED's recommendation, the Executive Officer decided to fund sorafenib (Nexavar) through the Exceptional Access Program for the second-line treatment of metastatic renal cell carcinoma after failure to cytokine therapy, according to specific criteria.

## Status

Funding available through the Ontario Public Drug Programs via the Exceptional Access Program.

### Highlights of Recommendation:

- ◆ Sorafenib (Nexavar) is an oral drug used to treat metastatic renal cell carcinoma (MRCC). MRCC is kidney cancer that has spread to other parts of the body.
- ◆ Interferon-alpha is a cytokine therapy that has been considered standard first-line treatment and is currently funded through the Ontario Public Drug Programs for the treatment of MRCC. This review considered the funding of sorafenib (Nexavar) for the treatment of MRCC in patients who have failed previous cytokine therapy (i.e. for second-line treatment).
- ◆ Evidence for the use of sorafenib (Nexavar) for the second-line treatment of MRCC comes from a large clinical study that demonstrated sorafenib (Nexavar) reduced the risk of cancer progression in patients who had failed previous cytokine therapy.
- ◆ Common side effects with sorafenib (Nexavar) include high blood pressure, bleeding, rash, hand-foot reactions (redness, pain, swelling on the hands and feet), diarrhea and fatigue.
- ◆ Sorafenib (Nexavar) costs approximately \$5,200 for one month of therapy. An economic evaluation found that this treatment does not provide good value for money.
- ◆ Overall, the Committee noted that sorafenib (Nexavar) provides clinical efficacy in the second-line treatment of MRCC after failure to cytokine therapy. Although there were concerns regarding cost-effectiveness, the Committee recognized that sorafenib (Nexavar) offers a treatment option for a select number of patients who have failed cytokine therapy; therefore, it was recommended that funding be considered for these patients.

### Background:

Metastatic renal cell carcinoma (MRCC) is an advanced form of kidney cancer that has spread to other parts of the body (e.g. to the lungs, lymph nodes, brain and liver).

Sorafenib (Nexavar) is an oral drug used for the treatment of MRCC. It works by targeting specific enzymes involved in the growth of cancer cells and the growth of blood vessels that sustain the tumours.

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## Detailed Discussion:

- ◆ The Committee reviewed the funding of sorafenib (Nexavar) for the treatment of MRCC on three occasions (December 2006, July 2007 and March 2008).
- ◆ The focus of the Committee's review was the TARGET study (*Escudier et al. New England Journal of Medicine 2007*), a large randomized controlled trial comparing sorafenib (Nexavar) to placebo in patients with MRCC who had failed previous cytokine treatment.
- ◆ The TARGET study reported a benefit in progression-free survival for sorafenib (Nexavar) over placebo. The median progression-free survival was 5.5 months in the sorafenib (Nexavar) group and 2.8 months in the placebo group.
- ◆ The primary objective of the TARGET study was to assess whether sorafenib (Nexavar) improved overall survival. However, the true overall survival benefit could not be determined because a large percentage of patients who had been on placebo were switched ("crossed-over") to receive sorafenib (Nexavar) when a progression-free survival advantage was observed.
- ◆ The Committee's March 2008 review was based on the manufacturer's request to consider the funding of sorafenib (Nexavar) for first-line treatment in patients who are unsuitable for cytokine therapy. The Committee noted that there is no evidence to support the use of sorafenib (Nexavar) in the first-line setting. Moreover, another multi-kinase inhibitor, sunitinib, with evidence for first-line treatment, is already funded through the Exceptional Access Program (EAP).
- ◆ Common side effects with sorafenib (Nexavar) include high blood pressure, bleeding, rash, hand-foot reactions, diarrhea and fatigue.
- ◆ Sorafenib (Nexavar) costs approximately \$5,200 for one month of therapy. A cost-benefit analysis showed that the cost is excessively high for the magnitude of health benefits provided by the treatment.
- ◆ Overall, the Committee acknowledged that sorafenib (Nexavar) has been shown to provide clinical efficacy for the second-line treatment of MRCC after failure to cytokine therapy but noted that the drug does not provide value for money.
- ◆ Given that sorafenib (Nexavar) offers a treatment option for a small number of patients who have failed cytokine therapy, the Committee recommended that sorafenib (Nexavar) be funded

through the Exceptional Access Program (EAP) according to the following clinical criteria, based on the patient entry criteria for the TARGET study:

- *For patients with histologically confirmed metastatic clear-cell renal-cell carcinoma, who have had prior nephrectomy; and*
  - *The disease has progressed after prior cytokine therapy within the previous eight months; and*
  - *The patient has a performance status of 0 or 1 on the basis of the Eastern Cooperative Oncology Group criteria; and*
  - *The patient has an intermediate-risk or low-risk status, according to the memorial Sloan-Kettering Cancer Center (MSKCC) prognostic score.*
- ◆ The CED worked jointly with a subcommittee involving cancer experts to review this cancer drug, as is done for all other cancer drug treatments.

## Cancer Care Ontario (CCO) Information:

Information on CCO chemotherapy regimens for MRCC is available at: [http://www.cancercare.on.ca/index\\_chemoRegimensbyDisease.htm](http://www.cancercare.on.ca/index_chemoRegimensbyDisease.htm)



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