Lenvatinib and sorafenib for differentiated thyroid cancer after radioactive iodine: a systematic review and economic evaluation

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Plain English summary

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What was the problem?

Differentiated thyroid cancer is a common type of thyroid cancer. For many patients, radioactive iodine is an effective treatment; however, for some patients, the treatment stops working or becomes unsafe. Two new drugs, lenvatinib (Lenvima®; Eisai Ltd, Hertfordshire, UK) and sorafenib (Nexar®; Bayer HealthCare, Leverkusen, Germany), may be new treatment options.

What did we do?

We reviewed the clinical evidence of lenvatinib and sorafenib. We also estimated the costs and benefits of treatment.

What did we find?

Compared with no treatment, treatment with lenvatinib or sorafenib may increase the time that people live with thyroid cancer before their disease gets worse; however, both drugs are expensive and may have unpleasant side effects.

What does this mean?

At their published (undiscounted) prices, lenvatinib or sorafenib may not be considered to provide good value for money to the NHS.
Criteria for inclusion in the Health Technology Assessment journal

Reports are published in Health Technology Assessment (HTA) if (1) they have resulted from work for the HTA programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

Reviews in Health Technology Assessment are termed ‘systematic’ when the account of the search appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

HTA programme

Health Technology Assessment (HTA) research is undertaken where some evidence already exists to show that a technology can be effective and this needs to be compared to the current standard intervention to see which works best. Research can evaluate any intervention used in the treatment, prevention or diagnosis of disease, provided the study outcomes lead to findings that have the potential to be of direct benefit to NHS patients. Technologies in this context mean any method used to promote health; prevent and treat disease; and improve rehabilitation or long-term care. They are not confined to new drugs and include any intervention used in the treatment, prevention or diagnosis of disease.

The journal is indexed in NHS Evidence via its abstracts included in MEDLINE and its Technology Assessment Reports inform National Institute for Health and Care Excellence (NICE) guidance. HTA research is also an important source of evidence for National Screening Committee (NSC) policy decisions.

This report

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