

# Cabozantinib and vandetanib for unresectable locally advanced or metastatic medullary thyroid cancer: a systematic review and economic model

Paul Tappenden,<sup>1\*</sup> Christopher Carroll,<sup>1</sup>  
Jean Hamilton,<sup>1</sup> Eva Kaltenthaler,<sup>1</sup> Ruth Wong,<sup>1</sup>  
Jonathan Wadsley,<sup>2</sup> Laura Moss<sup>3</sup> and  
Sabapathy Balasubramanian<sup>4</sup>

<sup>1</sup>Health Economics and Decision Science, School of Health and Related Research (SchARR), University of Sheffield, Sheffield, UK

<sup>2</sup>Weston Park Hospital, Sheffield, UK

<sup>3</sup>Velindre Cancer Centre, Cardiff, UK

<sup>4</sup>Department of Oncology and Metabolism, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, UK

\*Corresponding author [p.tappenden@sheffield.ac.uk](mailto:p.tappenden@sheffield.ac.uk)

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## Plain English summary

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## Plain English summary

**M**edullary thyroid carcinoma (MTC) is a rare form of cancer that presents as a mass of tumours in the thyroid gland of the neck. MTC affects both patients' health-related quality of life and survival. Targeted therapies (cabozantinib and vandetanib) are currently used to treat unresectable progressive and symptomatic MTC.

The evidence for the use of cabozantinib and vandetanib in patients with unresectable locally advanced or metastatic MTC was reviewed, and two clinical trials were identified. The trials suggest that both drugs improve progression-free survival. Neither trial demonstrated significant survival benefits for cabozantinib or vandetanib. Both drugs produced frequent adverse events, often leading to dose interruption or reduction.

Whether or not these therapies represent good value for money for the NHS was also assessed. Analyses indicate that the incremental cost-effectiveness ratios (ICERs) (a measure of cost-effectiveness) for cabozantinib and vandetanib versus best supportive care (BSC) in patients with symptomatic and progressive MTC are > £138,000 per quality-adjusted life-year (QALY) gained. Within a subgroup of patients with symptomatic and progressive MTC and carcinoembryonic antigen and/or calcitonin doubling times of  $\leq 24$  months, the ICER for vandetanib versus BSC remains > £66,000 per QALY gained.

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