NICE National Institute for Health and Care Excellence

Putting NICE guidance into practice

Resource impact report:
Encorafenib plus cetuximab for previously treated BRAF V600E mutation-positive metastatic colorectal cancer (TA668)

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Summary

NICE has recommended encorafenib plus cetuximab, within its marketing authorisation, as an option for treating BRAF V600E mutation-positive metastatic colorectal cancer in adults who have had previous systemic treatment. It is recommended only if the company provides it according to the commercial arrangements.

We estimate that:

- 430 people with BRAF V600E mutation-positive metastatic colorectal cancer in adults who have had previous systemic treatment are eligible for treatment with encorafenib plus cetuximab each year.
- 380 people will receive treatment with encorafenib plus cetuximab from year 2023/24 onwards once uptake has reached 90% as shown in table 1.

Table 1 Estimated number of people in England receiving encorafenib plus cetuximab

	2020/21	2021/22	2022/23	2023/24	2024/25
Uptake rate for encorafenib plus cetuximab (%)	40	80	85	90	90
Population receiving encorafenib plus cetuximab each year	170	340	360	380	380

This report is supported by a local resource impact template because the list prices of encorafenib and cetuximab have discounts that are commercial-in-confidence. The discounted prices of encorafenib and cetuximab can be put into the template and other variables may be amended.

This technology is commissioned by NHS England. Providers are NHS hospital trusts.

1 Encorafenib plus cetuximab

1.1 NICE has recommended encorafenib plus cetuximab, within its marketing authorisation, as an option for treating BRAF V600E mutation-positive metastatic colorectal cancer in adults who have had previous systemic treatment. It is recommended only if the company provides it according to the commercial arrangements.

1.2 Colorectal cancer is a malignant tumour arising from the lining of the large intestine (colon and rectum). Metastatic colorectal cancer with a BRAF V600E mutation is a rare type of colorectal cancer. It is associated with a poorer prognosis and has a greater risk of recurring than colorectal cancer without the BRAF mutation.

1.3 Treatment for BRAF V600E mutation-positive metastatic colorectal cancer after previous systemic treatment includes combination chemotherapy, usually FOLFIRI (5-fluorouracil, folic acid and irinotecan) followed by trifluridine–tipiracil then best supportive care.

1.4 Encorafenib plus cetuximab is the first colorectal cancer treatment that targets the BRAF V600E mutation and could be used as second or later in the treatment pathway.

1.5 In response to COVID-19, NHS England is already commissioning encorafenib plus cetuximab.

2 Resource impact of the guidance

2.1 We estimate that:

- 430 people with BRAF V600E mutation-positive metastatic colorectal cancer in adults who have had previous systemic treatment are eligible for treatment with encorafenib plus cetuximab each year.

- 380 people will receive encorafenib plus cetuximab from year 2023/24 onwards once uptake has reached 90%.

2.2 The current treatment and future uptake figure assumptions are based on the company submission and NHS England clinical expert opinion and are shown in the resource impact template. Table 2 shows the number of people in England who are estimated to have encorafenib plus cetuximab by financial year.

Table 2 Estimated number of people receiving encorafenib plus cetuximab using NICE assumptions

	2020/21	2021/22	2022/23	2023/24	2024/25
Uptake rate for encorafenib plus cetuximab (%)	40	80	85	90	90
Population receiving encorafenib plus cetuximab each year	170	340	360	380	380

2.3 This report is supported by a local resource impact template. Encorafenib and cetuximab both have agreed patient access schemes which make them available with commercial-in-confidence discounts to the list price. The discounted prices of encorafenib and cetuximab can be put into the template and other variables may be amended. For enquiries about the patient access scheme contact: Encorafenib: PAS@pierre-fabre.com and Cetuximab: UKpricing@merckgroup.com.

Savings and benefits

2.4 Encorafenib and cetuximab could reduce administration costs relative to the FOLFIRI chemotherapy option. This is modelled in the template.

2.5 Encorafenib plus cetuximab will be delivered in chemotherapy units that currently treat metastatic colorectal cancer. Although

encorafenib is an oral treatment, regular attendance is needed for intravenous cetuximab. However, because encorafenib is oral and cetuximab is administered as a simple parenteral infusion, the treatment might help release capacity compared to FOLFIRI which requires complex prolonged chemotherapy infusions.

2.6 The committee noted that encorafenib and cetuximab is not a chemotherapy and may transform people's quality of life. They also thought it was plausible that encorafenib plus cetuximab would result in a survival gain of more than 3 months compared with standard care, despite limitations in the comparative evidence base.

3 Implications for commissioners

3.1 This technology is commissioned by NHS England. Providers are NHS hospital trusts.

3.2 Encorafenib plus cetuximab falls within the programme budgeting category PB02C: Cancer, LGI.

4 How we estimated the resource impact

The population

4.1 In 2017, around 34,800 new cases of adults with colorectal cancer were recorded in England (Office for National Statistics, 2017).

4.2 Table 3 shows the number of people with BRAF V600E mutation-positive metastatic colorectal cancer who are eligible for treatment with encorafenib plus cetuximab.

Table 3 Number of people eligible for treatment in England

Population	Proportion of previous row (%)	Number of people
Adult population in England[1]		44,022,560
Incidence of colorectal cancer[2]	0.08	34,800
People with metastatic colorectal cancer[3]	25	8,700
People with BRAF V600E mutation[4]	10	870
Total number of people eligible for treatment with encorafenib plus cetuximab[5]	48.9	430
Total number of people estimated to have encorafenib plus cetuximab each year from year 2023/24[6]	90	380

[1] Clinical Commissioning Group Mid-Year Population Estimates - Office for National Statistics

[2] Cancer registration statistics, England -ICD10 (C18-20).

[3] Stein A and Bokemeyer C (2013) Prolonging survival through a personalized approach in metastatic colorectal cancer. The Journal of Oncopathology 1:3, 31-41.

[4] Safaee Ardekani G, Jafarnejad SM, Tan L, et al. The prognostic value of BRAF mutation in colorectal cancer and melanoma: a systematic review and meta-analysis. PLoS One. 2012;7(10): e47054

[5] Hess LM, Cui ZL, Mytelka DS, et al. Treatment patterns and survival outcomes for patients receiving second-line treatment for metastatic colorectal cancer in the USA. Int J Colorectal Dis. 2019 Apr;34(4):581-588. doi: 10.1007/s00384-018-03227-5. Epub 2019 Jan 9.

[6] Company submission

Assumptions

4.3 The resource impact template assumes that:

- FOLFIRI and trifluridine–tipiracil are relevant comparators for encorafenib plus cetuximab after 1 previous line of treatment.
- Trifluridine–tipiracil is the relevant comparator for encorafenib plus cetuximab after 2 previous lines of treatment. This is in line with NICE Technology appraisal guidance 405. However, third line treatments have not been modelled (see other factors).
- Treatment duration for all therapies included in the model is estimated to be 1 year. However, treatment duration may be

significantly lower in practice. Median progression free survival in the BEACON trial is 4.27 months in the encorafenib and cetuximab treatment arm, which is closely aligned to time on treatment. Treatment discontinuation has not been considered for all therapies.

- Treatment cost with encorafenib plus cetuximab includes chemotherapy delivery costs of £159 on day 1 of every 14-day treatment cycle (Healthcare resource group SB12Z: Deliver simple parenteral chemotherapy at first Attendance). Taken from NHS national tariff 2020/21.
- Encorafenib plus cetuximab will not incur additional monitoring costs compared with comparator treatments.
- BRAF V600E testing will not incur additional monitoring costs compared with comparator treatments as it is already recommended in the NICE clinical guideline 151 for colorectal cancer.
- Treatment cost with trifluridine–tipiracil includes oral chemotherapy delivery costs of £127 on day 1 of every treatment cycle (Healthcare resource group SB11Z: Deliver Exclusively Oral Chemotherapy). Taken from NHS national tariff 2020/21.
- Treatment costs with FOLFIRI includes chemotherapy delivery costs of £478 on day 1 of every 14-day treatment cycle (Healthcare resource group SB14Z: Deliver Complex Chemotherapy, including Prolonged Infusional Treatment, at First Attendance). Taken from NHS national tariff 2020/21.
- In response to COVID-19, NHSE is already commissioning encorafenib plus cetuximab. This has an impact on the rate of uptake which is expected to rise quickly from 40% in year 1 to 80% by year 2, with a predicted maximum uptake of 90% achieved by 2023/24.

Other factors

4.4 The model does not consider resource impact of encorafenib plus cetuximab after second line treatment. This is not expected to be significant.

4.5 Based on the committee conclusions, trifluridine–tipiracil, a second line comparator, is also a relevant comparator for encorafenib plus cetuximab at third or subsequent lines. Therefore, treatments would just be a switch between trifluridine–tipiracil and encorafenib plus cetuximab. Also, the number of people receiving third or subsequent treatments may be small because at this stage of the treatment pathway they may not be fit enough for chemotherapy.

About this resource impact report

This resource impact report accompanies the NICE guidance on Encorafenib plus cetuximab for previously treated BRAF V600E mutation-positive metastatic colorectal cancer and should be read with it.