NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Appraisal consultation document

Avapritinib for treating unresectable or metastatic gastrointestinal stromal tumours

The Department of Health and Social Care has asked the National Institute for Health and Care Excellence (NICE) to produce guidance on using avapritinib in the NHS in England. The appraisal committee has considered the evidence submitted by the company and the views of non-company consultees and commentators, clinical experts and patient experts.

This document has been prepared for consultation with the consultees. It summarises the evidence and views that have been considered, and sets out the recommendations made by the committee. NICE invites comments from the consultees and commentators for this appraisal and the public. This document should be read along with the evidence (see the <u>committee</u> <u>papers</u>).

The appraisal committee is interested in receiving comments on the following:

- Has all of the relevant evidence been taken into account?
- Are the summaries of clinical and cost effectiveness reasonable interpretations of the evidence?
- Are the recommendations sound and a suitable basis for guidance to the NHS?
- Are there any aspects of the recommendations that need particular consideration to ensure we avoid unlawful discrimination against any group of people on the grounds of race, gender, disability, religion or belief, sexual orientation, age, gender reassignment, pregnancy and maternity?

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Note that this document is not NICE's final guidance on this technology. The recommendations in section 1 may change after consultation.

After consultation:

- The appraisal committee will meet again to consider the evidence, this appraisal consultation document and comments from the consultees.
- At that meeting, the committee will also consider comments made by people who are not consultees.
- After considering these comments, the committee will prepare the final appraisal document.
- Subject to any appeal by consultees, the final appraisal document may be used as the basis for NICE's guidance on using avapritinib in the NHS in England.

For further details, see <u>NICE's guide to the processes of technology</u> <u>appraisal</u>.

The key dates for this appraisal are:

Closing date for comments: 17 November 2020

Second appraisal committee meeting: TBC

Details of membership of the appraisal committee are given in section 5

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1 Recommendations

- 1.1 Avapritinib is not recommended, within its marketing authorisation, for treating unresectable or metastatic gastrointestinal stromal tumours (GIST) that have the platelet-derived growth factor receptor alpha (PDGFRA) D842V mutation in adults.
- 1.2 This recommendation is not intended to affect treatment with avapritinib that was started in the NHS before this guidance was published. People having treatment outside this recommendation may continue without change to the funding arrangements in place for them before this guidance was published, until they and their NHS clinician consider it appropriate to stop.

Why the committee made these recommendations

People with unresectable or metastatic GIST with the PDGFRA D842V mutation usually have imatinib then best supportive care, or best supportive care only, in specialist sarcoma centres. This is referred to as established clinical management.

There is no direct evidence comparing avapritinib with established clinical management but indirect evidence suggests that people with GIST who have avapritinib may live longer, and also live longer before their disease gets worse.

Avapritinib meets NICE's criteria to be a life-extending treatment at the end of life. But, even taking that into account, the most plausible cost-effectiveness estimates are higher than the range normally considered a cost-effective use of NHS resources. So, avapritinib is not recommended.

Avapritinib does not meet the criteria to be included in the Cancer Drugs Fund because it does not have the potential to be cost effective at the price offered.

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2 Information about avapritinib

Marketing authorisation indication

2.1 On 24 September 2020 the European Medicines Agency (EMA) granted conditional marketing authorisation for avapritinib for the treatment of unresectable or metastatic gastrointestinal stromal tumours (GIST) that have the platelet-derived growth factor receptor alpha (PDGFRA) D842V mutation.

Dosage in the marketing authorisation

2.2 The dosage schedule will be available in the summary of product characteristics [add hyperlink when available].

Price

2.3 Avapritinib costs £26,666.67 for 30 tablets (100 mg, 200 mg or 300 mg; excluding VAT; company submission).

The company has a commercial arrangement, which would have applied if the technology had been recommended.

3 Committee discussion

The <u>appraisal committee</u> considered evidence submitted by Blueprint Medicines, a review of this submission by the evidence review group (ERG), the technical report, and responses from stakeholders. See the <u>committee papers</u> for full details of the evidence.

The appraisal committee was aware that 2 issues were resolved during the technical engagement stage but uncertainties relating to these issues were discussed:

• It is preferable to extrapolate progression-free survival for second and third-line treatments in the established clinical management arm of the economic model with the Weibull distribution curve (see technical report pages 3 and 4).

 It is preferable to extrapolate time on treatment for second and third-line treatments in the established clinical management arm of the economic model with the Weibull distribution curve (see technical report page 5).

The committee discussed all the other issues in the technical report that were outstanding after the technical engagement stage. The committee also discussed 2 new issues: treatment dosing pattern in the updated economic model (issue 10) and dose reduction and drug wastage (issue 11). These were identified after technical engagement.

Clinical need

A new treatment option is needed for unresectable or metastatic GIST that has the PDGFRA D842V mutation

3.1 The patient expert said that being diagnosed with unresectable or metastatic gastrointestinal stromal tumours (GIST) that has the PDGFRA D842V mutation was "devastating". They said that they started treatment with imatinib while waiting for genetic testing results but it had no benefit. The expert said that once they had genetic confirmation of the PDGFRA D842V mutation they started treatment with avapritinib. They said it reduced their tumour growth and that, although there were a few side effects such as watery eyes, swelling, a dry mouth, and a change in hair colour, they were manageable. The clinical expert explained that GIST that has the PDGFRA D842V mutation is a rare and debilitating condition with high rates of mortality and limited treatment options. The clinical and patient experts said that avapritinib would be a welcome new treatment to help increase the chances of survival. The clinical experts highlighted that metastatic GIST is often difficult to diagnose and that the genetic analysis to identify the PDGFRA D842V mutation can sometimes take a month or more to process. They explained that avapritinib appears to be a welltolerated drug that has led to improved, durable responses to treatment and progression-free survival in clinical trials that include people with unresectable or metastatic GIST with the PDGFRA D842V mutation. The

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clinical experts explained that, although avapritinib is a promising treatment, more follow up is needed to fully understand the nature and frequency of the neurocognitive symptoms that appear unique to this tyrosine kinase inhibitor. The committee noted that it would be interested to see further evidence of neurocognitive symptoms in people who take avapritinib. It concluded that there is a clinical need for an effective treatment that improves survival for people with unresectable or metastatic GIST that has the PDGFRA D842V mutation.

Comparators

Established clinical management is imatinib then best supportive care, or best supportive care alone

3.2 The clinical experts explained that in a sarcoma specialist centre people usually present with a confirmed PDGFRA D842V mutation because mutational analysis is now standard practice. The committee acknowledged that people may be offered avapritinib through the compassionate access programme but pointed out that this did not constitute established clinical management. The clinical experts said that if there was no compassionate access programme most people are offered best supportive care. They said that some people who did not yet have a confirmed mutational status may be offered imatinib as first-line therapy for a short period of time while waiting. But this is only if there was a defined clinical need because only a small percentage of people have a short-term clinical response. The clinical experts agreed that it is very uncommon in NHS practice in England for people with the PDGFRA D842V mutation to have sunitinib or regorafenib, and that most are offered best supportive care. The committee agreed and concluded that imatinib then best supportive care, or best supportive care alone, are established clinical management in the NHS in England.

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Clinical evidence

The main clinical evidence for avapritinib is from the NAVIGATOR study PDGFRA D842V subgroup

3.3 The clinical-effectiveness evidence for avapritinib came from the NAVIGATOR study. This is a non-randomised, open-label, single-arm study that included people aged 18 or over who had been diagnosed with unresectable or metastatic GIST (n=237). In the subgroup with the PDGFRA D842V mutation (n=56), median overall survival was not reached, and median progression-free survival was 29.2 months. The committee noted that, based on the response rates reported in NAVIGATOR, avapritinib shows promise as an effective treatment for GIST with the PDGFRA D842V mutation. But it also noted the uncertainty over outcomes such as overall survival. The committee acknowledged that, because GIST with the PDGFRA D842V mutation is rare, a randomised controlled trial is difficult to do. The clinical expert explained that the patients in the clinical study were broadly representative of those in the NHS in England (see section 3.4). The committee agreed that the study did not provide evidence of the effectiveness of avapritinib compared with established clinical management. But it concluded that it was appropriate to consider the PDGFRA D842V subgroup in NAVIGATOR for decision making.

The populations in the main evidence are broadly generalisable to the NHS in England

3.4 The NAVIGATOR study and BLU-285-1002 retrospective chart review allowed patients to have tyrosine kinase inhibitors before avapritinib or established clinical management. The clinical experts explained that the Eastern Cooperative Oncology Group (ECOG) performance scores of people in NAVIGATOR (which were 0 to 1) were similar to what they see in clinical practice. They noted, however, that BLU-285-1002 did not record ECOG performance scores. The clinical experts said that the

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populations were broadly generalisable to the NHS in England. The clinical experts also commented at technical engagement that the populations were broadly generalisable, although they noted that more patients in other countries have more lines of therapy. In the company's indirect treatment comparison, the anatomical site (approximately 90%) are in the stomach), size, and mitotic rate (how fast the cancer cells are dividing) of the tumour could influence the results because they could not be adjusted for in the comparison. The clinical experts said that this may be the case for tumours that can be operated on, but for metastatic tumours this is not as important. The committee recognised the uncertainties in both NAVIGATOR and BLU-285-1002 but agreed they were the best available evidence for avapritinib and established clinical management. The committee noted that both NAVIGATOR and BLU-285-1002 included people who had tyrosine kinase inhibitors and so may not fully reflect the treatments received by people in the NHS in England. However, it concluded that, based on the clinical expert comments, they were broadly generalisable to clinical practice.

The treatment pathway in the economic model does not reflect clinical practice in England

3.5 The company's economic model assumed that everyone who had established clinical management had first-line therapy with imatinib then sunitinib second line and regorafenib third line, before having best supportive care. The committee was concerned that this did not reflect how people with unresectable or metastatic GIST with the PDGFRA D842V mutation would be treated in the NHS in England. The clinical experts explained that no one with the PDGRFA D842V mutation treated in a sarcoma specialist centre has all 3 lines of therapy. This is because the experts considered that there would be no clinical benefit from sunitinib or regorafenib, and they are associated with poor tolerability compared with imatinib. Two other studies provided data for the company's economic model: BLU-285-1002, which was a retrospective

chart review of people having established clinical management, andAppraisal consultation document – avapritinib for treating unresectable or metastatic gastrointestinal stromaltumoursPage 8 of 20

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VOYAGER (n=184), which is an open-label company-sponsored randomised control trial comparing avapritinib with regorafenib. The committee highlighted that in BLU-285-1002 and VOYAGER there was no response to treatment in people with unresectable or metastatic GIST with the PDGFRA D842V mutation. The clinical experts noted that it often took a month or more to confirm the PDGFRA D842V mutation. They said that while waiting for this up to 50% may have imatinib because it is generally well tolerated. The ERG's base-case economic model estimated that 20% of people have imatinib (see section 3.14). The committee agreed that imatinib may be offered to people with unresectable or metastatic GIST with the PDGFRA D842V mutation in a sarcoma specialist centre, at least until the mutation was confirmed, but that sunitinib and regorafenib are not given in the NHS in England. The committee concluded that the treatment pathway in the company's economic model does not reflect clinical practice in England.

The company's economic model

The method for extrapolating overall survival is not appropriate for decision making

- 3.6 To model overall survival in the established clinical management arm, the company extrapolated match-adjusted, inverse probability weighted (IPW) data from the BLU-285-1002 retrospective chart review using a Weibull distribution curve. To model overall survival in the avapritinib arm, the company's original base case used a component modelling approach, which used:
 - pre-discontinuation mortality and time on treatment data from the NAVIGATOR study
 - extrapolated survival for patients who had established clinical management in BLU-285-1002.

The company also applied a post-discontinuation treatment effect

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duration assumption of 60 months (see section 3.9). A log-normal distribution curve was used to extrapolate NAVIGATOR overall survival with censoring on discontinuation, so that mortality was only captured for patients still on avapritinib. The ERG noted that it would have preferred to have seen overall survival modelled for the avapritinib arm using uncensored Kaplan–Meier data from the NAVIGATOR study because this approach uses all the evidence from the clinical study. In its base case, the ERG used the company's approach to modelling overall survival, but in order to fit the trial overall survival data, the postdiscontinuation treatment effect duration had to be reduced to 1 month (see section 3.9). The committee noted that using the companypreferred modelling approach for overall survival, only 1 death occurred before stopping treatment with avapritinib, with 94% of deaths in the NAVIGATOR study not taken into account in the extrapolation for avapritinib. After technical engagement, the company provided 2 analyses using the full overall survival data from the NAVIGATOR study IPW analysis that was uncensored for discontinuation (that is, it did not exclude people who stopped treatment with avapritinib). The first was for all people with the PDGFRA D842V mutation in the study, and the second for those with the PDGFRA D842V mutation who only had avapritinib as first-line therapy. Because of the small sample size and uncertainty with the first-line analysis, the company and ERG noted that it should be treated with caution. Despite this, the committee acknowledged that the overall survival estimates for people who had avapritinib as first-line therapy were similar to those of the whole PDGFRA D842V population, which supports the use of the full data from NAVIGATOR in the analyses. The committee noted that direct extrapolation of overall survival data was preferred because it makes better use of all data from the clinical study. The committee concluded that the full overall survival data from the NAVIGATOR study IPW analysis that is uncensored for discontinuation should be used to extrapolate overall survival.

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The Weibull distribution model should be used to extrapolate overall survival

3.7 The company provided extrapolations for both sets of data using the exponential, Weibull, Gompertz, log-normal and log-logistic distribution models but highlighted that its preferred models were the log-logistic and log-normal. The committee noted that the Weibull model gave the best statistical fit to the data and that Weibull was also applied in the company's post-technical engagement base case to extrapolate overall survival for established clinical management. It agreed that overall survival extrapolation should be done directly from the full uncensored data from the NAVIGATOR study using the same distribution model as for established clinical management. The committee concluded that the Weibull distribution model should be used to extrapolate overall survival.

The assumption that time on treatment is the same as progression-free survival is uncertain

3.8 The company's original base-case economic model assumes that time on treatment for avapritinib was captured and extrapolated using a Gompertz parametric model. This is because this provided clinically plausible results based on the IPW data from the NAVIGATOR study. At technical engagement, the company amended its base case in line with the ERG's preference for the Weibull model. The company also agreed with the ERG's assumption that time on treatment for avapritinib was the same as progression-free survival time. The committee was concerned that this assumption does not account for people treated with avapritinib after disease progression, so may underestimate time on treatment. The clinical experts said that it can be difficult to know when the disease has progressed, and treatment continues until progression was clear and symptomatic. They said that people continue to have avapritinib for as long as possible because there are no effective treatments once it is stopped. The committee agreed that the time on treatment is uncertain. It agreed that assuming it is the same as progression-free survival may

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underestimate time on treatment, and so underestimate treatment costs. It concluded therefore that this assumption from the company's economic model was uncertain.

The post-discontinuation treatment effect duration assumption is not appropriate for decision making

3.9 The company's original base-case economic model assumed that after stopping treatment with avapritinib there is a gradual change in overall survival hazard from the avapritinib arm to the established clinical management arm. This means a gradual loss of treatment effect for avapritinib over 60 months (5 years). At technical engagement, the company amended the assumption to 18 months. This is slightly below the midpoint between the assumptions used in 2 previous NICE tyrosine kinase inhibitor appraisals (see the NICE guidance on osimertinib for untreated EGFR mutation-positive non-small-cell lung cancer and cabozantinib for previously treated advanced renal cell carcinoma). The committee noted that these appraisals are not in GIST and that the company did not provide peer-reviewed evidence of a postdiscontinuation treatment effect. The ERG explained that it preferred a post-discontinuation treatment effect duration of 1 month. This is because the longer the assumed duration is, the more the overall survival in the economic model is overestimated when compared with the observed overall survival data in NAVIGATOR. The committee recalled that treatment is given until there is clear symptomatic progression. Because the next therapy is best supportive care, clinicians continue treatment for as long as there is clinical benefit (see section 3.8). The committee agreed that the post-discontinuation treatment effect duration scenario does not fit with clinical practice in the NHS in England. It noted that the assumption may only be relevant if it had accepted the company's preferred modelling methodology for extrapolating avapritinib overall survival (see section 3.6), which it did not, instead preferring to use the uncensored overall survival data from NAVIGATOR. Therefore, the

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committee concluded that the post-discontinuation treatment effectAppraisal consultation document – avapritinib for treating unresectable or metastatic gastrointestinal stromaltumoursPage 12 of 20
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duration assumption in the company's economic model is not appropriate for decision making.

Dosing

Alternate-day dosing is not appropriate for decision making because it is not in the licensed indication

3.10 At technical engagement, the company submitted a new scenario in the economic model, in which people were given the same concentration of avapritinib every other day (alternate-day dosing). The scenario assumes that there is no loss of efficacy with the less frequent dosing. The committee noted that there was no peer-reviewed evidence presented to suggest that avapritinib would be given on alternate days (that is, not in line with its licensed indication). The Cancer Drugs Fund clinical lead said that avapritinib would be used only in line with its market authorisation in the NHS in England. The committee noted that alternate-day dosing would have a significant impact on the cost-effectiveness estimates. It agreed that it can only assess a technology within its licensed indication and concluded that alternate-day dosing was not appropriate for decision making.

Dose reduction and drug wastage should be included in the costeffectiveness analyses

3.11 The summary of product characteristics for avapritinib states the recommended starting dose is 300 mg once daily and the dose should be adjusted based on safety and tolerability. The committee noted that in the NAVIGATOR study 71% of patients with unresectable or metastatic GIST with the PDGFRA D842V mutation had dose reductions to 200 mg or 100 mg once daily during the course of therapy. It also noted that 12 months after starting treatment 27 patients were still taking avapritinib, with 22% on 300 mg once daily, 37% on 200 mg once daily and 41% on 100 mg once daily. The committee was concerned that no analyses had been done to account for the drug wastage costs associated with patients

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who started on the recommended dose of 300 mg daily and later had a dose reduction. The patient expert explained that when they had a dose reduction many unused higher dosage avapritinib tablets were destroyed by the pharmacy when they returned them. The clinical experts said that it is difficult to avoid wastage due to dose reductions because unused tablets cannot be repackaged. The committee agreed that there is likely to be drug wastage and, because the indicative price of avapritinib is the same regardless of dosage, it could affect treatment costs. It concluded that dose reduction and drug wastage should be included in the cost-effectiveness analyses.

Utility values in the economic model

The company's utility values are acceptable

3.12 The company's original base-case economic model used utility values from previous NICE guidance on imatinib for unresectable and/or metastatic GIST, sunitinib for the treatment of GIST and regorafenib for previously treated unresectable or metastatic GIST to capture healthrelated quality of life as the person moves through the treatment pathway. This is because no quality of life data were collected in the NAVIGATOR study. At technical engagement the company amended the first-line progression-free survival utility value to 0.822 because this reflects the general population value. Third-line progression-free survival and progressed disease were amended to 0.782 and 0.727 respectively because these were taken from VOYAGER, a more up to date study that includes people with unresectable or metastatic GIST with the PDGFRA D842V mutation. The committee was concerned that the utility value for third-line progression-free survival (0.782) was higher than for second line (0.781) and so not realistic. The ERG agreed that it was unrealistic, noting that the difference was marginal, but said that the utility values from VOYAGER were more appropriate because they were taken from a larger relevant patient population than NAVIGATOR. The committee agreed that, in the absence of utility values from the NAVIGATOR study, the

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values used by the company after technical engagement were appropriate. It concluded that the utility values for people with unresectable or metastatic GIST with the PDGFRA D842V mutation were acceptable.

Cost-effectiveness estimates

Avapritinib meets the end of life criteria

3.13 The committee considered the advice about life-extending treatments for people with a short life expectancy in <u>NICE's guide to the methods of technology appraisal</u>. Using the company's cost-effectiveness model, the population treated with established clinical management was estimated to have a mean overall survival of 23.72 months. The clinical experts explained that median overall survival is around 15 months for people with metastatic disease. The committee accepted that avapritinib meets the short life expectancy criterion for end of life. It also noted that, based on evidence from NAVIGATOR and predictions from the economic model (using the committee's preferred assumptions), avapritinib was likely to extend life by over 3 months and therefore meets the extension-to-life criterion. The committee concluded that avapritinib meets both end of life criteria.

The most plausible ICER for avapritinib is higher than what NICE normally considers a cost-effective use of NHS resources

- 3.14 The company provided an updated base case after technical engagement that:
 - used the Weibull distribution model for second and third-line treatments in the established clinical management arm of the economic model (see issues resolved during technical engagement stage) and assumed that the time on treatment for avapritinib was the same as progressionfree survival time (see section 3.8)

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- had a comparator of established clinical management consisting of first-line therapy with imatinib then sunitinib second line and regorafenib third line, before having best supportive care (see section 3.5)
- used the Weibull distribution curve for extrapolating overall survival for the avapritinib and established clinical management arms of the economic model (see section 3.7)
- used the Weibull distribution curve for extrapolating progression-free survival for second and third-line treatments in the established clinical management arm of the economic model (see issues resolved during technical engagement stage)
- applied a post-discontinuation treatment effect duration of 18 months (see section 3.9)
- used the general population utility value of 0.822 for first-line progression-free survival, second-line progression-free survival from <u>NICE's guidance on regorafenib for unresectable or metastatic GIST</u>, and third-line progression-free survival and progressed disease values from the VOYAGER study (see section 3.12).

All cost-effectiveness estimates included the company's commercial arrangement for avapritinib. The incremental cost-effectiveness ratio (ICER) for avapritinib compared with established clinical management was £80,342 per quality-adjusted life year (QALY) gained. When all commercial arrangements are taken into account the ICER was above what NICE considers an acceptable use of NHS resources. The ICER cannot be reported because it is confidential. The committee noted that using the uncensored overall survival IPW analysis data from NAVIGATOR resulted in an ICER higher than the company's base case of £80,342 per QALY gained. The updated ERG base-case analysis after technical engagement incorporated the same new assumptions as the company. However, it assumed the proportion of patients on tyrosine kinase inhibitors for established clinical management was 20% imatinib, 10% sunitinib and 10% regorafenib instead of 100% of

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patients receiving imatinib first line, then sunitinib second line and regorafenib third line. It also assumed a post-discontinuation treatment effect duration of 1 month. The ERG's preferred base-case ICER for avapritinib compared with established clinical management was £125,309 per QALY gained. When all commercial arrangements were taken into account, the ICER for avapritinib compared with established clinical management with these assumptions was above the range NICE normally considers a cost-effective use of NHS resources. The ICER cannot be reported because it is confidential.

The committee recalled its preferred modelling assumptions, which should be applied to future cost-effectiveness analyses:

- extrapolation of the full overall survival data from the NAVIGATOR IPW analysis with the Weibull parametric model, uncensored for discontinuation using the March 2020 data cut (see sections 3.6 and 3.7)
- established clinical management consisting of imatinib (20% to 50% of patients awaiting genetic confirmation of the PDGFRA D842V mutation) then best supportive care (see section 3.5)
- a general population utility value of 0.822 for first-line progression-free survival, second-line progression-free survival from <u>NICE's guidance on</u> <u>regorafenib for unresectable or metastatic GIST</u> and third-line progression-free survival and progressed disease values from the VOYAGER study (see section 3.12)
- accounting for dose reduction and drug wastage (see section 3.11).

Using these preferred assumptions, the committee considered that the most plausible ICER for avapritinib compared with established clinical management was likely to be higher than the company and ERG base-case ICERs. The committee concluded that the most plausible range of ICERs for avapritinib using its preferred modelling assumptions were

higher than what NICE considers an acceptable use of NHS resources. Appraisal consultation document – avapritinib for treating unresectable or metastatic gastrointestinal stromal tumours Page 17 of 20

The ICERs cannot be reported because they contain confidential comparator commercial arrangements.

Conclusion

Avapritinib is not recommended for routine use in the NHS

3.15 The committee considered all of the available evidence for avapritinib in this appraisal. After taking into account its preferred modelling assumptions and NICE's criteria on end of life, the committee considered that the most plausible ICER was above the normally acceptable range usually considered a cost-effective use of resources. Because of this, the committee concluded avapritinib could not be recommended for routine use in unresectable or metastatic GIST with the PDGFRA D842V mutation.

Cancer Drugs Fund

Avapritinib is not recommended for use in the Cancer Drugs Fund

3.16 Having concluded that avapritinib could not be recommended for routine use, the committee then considered if it could be recommended for treating people with unresectable or metastatic GIST with the PDGFRA D842V mutation within the Cancer Drugs Fund. The committee discussed the arrangements for the Cancer Drugs Fund agreed by NICE and NHS England in 2016, noting NICE's Cancer Drugs Fund methods guide (addendum). The company had expressed an interest in the technology being considered for funding through the Cancer Drugs Fund. The Cancer Drugs Fund clinical lead said that avapritinib was a promising treatment and entry into the Cancer Drugs Fund may help to address uncertainties highlighted by the committee. However, they said that avapritinib needs to have plausible potential to be cost effective. The committee were concerned that the company's economic model was not structurally robust for decision making (see sections 3.5 to 3.9). The committee acknowledged that some of the clinical uncertainty (such as overall

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survival and time on treatment) may be addressed by collecting data from patients having avapritinib through the Cancer Drugs Fund. But it agreed that at the current price avapritinib does not have plausible potential for cost effectiveness. Even taking into account the end of life criteria (see section 3.13), the ICERs were all above the acceptable range when commercial arrangements were included. The committee concluded that avapritinib did not meet the criteria to be considered for inclusion in the Cancer Drugs Fund so did not recommend it for use within the Cancer Drugs Fund.

Other factors

There are no additional benefits not already captured in the economic analysis

3.17 The committee considered the innovative nature of avapritinib. It agreed that avapritinib could be considered an important treatment option for this population. The committee concluded that it did not think there were any additional benefits associated with avapritinib that had not been captured in the economic analysis.

4 Proposed date for review of guidance

4.1 NICE proposes that the guidance on this technology is considered for review by the guidance executive 3 years after publication of the guidance. NICE welcomes comment on this proposed date. The guidance executive will decide whether the technology should be reviewed based on information gathered by NICE, and in consultation with consultees and commentators.

Gary McVeigh Chair, appraisal committee October 2020

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5 Appraisal committee members and NICE project team

Appraisal committee members

The 4 technology appraisal committees are standing advisory committees of NICE. This topic was considered by <u>committee D</u>.

Committee members are asked to declare any interests in the technology to be appraised. If it is considered there is a conflict of interest, the member is excluded from participating further in that appraisal.

The <u>minutes of each appraisal committee meeting</u>, which include the names of the members who attended and their declarations of interests, are posted on the NICE website.

NICE project team

Each technology appraisal is assigned to a team consisting of 1 or more health technology analysts (who act as technical leads for the appraisal), a technical adviser and a project manager.

Stephen Robinson

Technical lead

Caron Jones Technical adviser

Gavin Kenny Project manager

ISBN: [to be added at publication]

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