NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Draft guidance consultation

Catumaxomab for intraperitoneal treatment of malignant ascites caused by EpCAM-positive carcinomas when further systemic anticancer treatment is unsuitable

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

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

The evaluation 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 age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex or sexual orientation?

Issue date: July 2026

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- After considering these comments, the committee will prepare the final draft guidance.
- Subject to any appeal by stakeholders, the final draft guidance may be used as the basis for NICE's guidance on using catumaxomab in the NHS in England.

For further details, see NICE's technology appraisal and highly specialised technologies guidance manual.

The key dates for this evaluation are:

- Closing date for comments: 31 July 2026
- Second evaluation committee meeting: To be Confirmed
- Details of the evaluation committee are given in section 4

1 Recommendations

1.1 Catumaxomab should not be used for the intraperitoneal treatment of malignant ascites caused by epithelial cellular adhesion molecule (EpCAM)-positive carcinomas in adults when further systemic anticancer treatment is unsuitable.

1.2 This recommendation is not intended to affect treatment with catumaxomab 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 healthcare professional consider it appropriate to stop.

What this means in practice

These are NICE's draft recommendations. If these recommendations become final, catumaxomab would not be required to be funded and should not be used routinely in the NHS in England for the condition and population in the recommendations.

This is because there is not enough evidence to determine whether catumaxomab offers benefit and is value for money in this population.

Why the committee made these recommendations

Usual treatment for malignant ascites (a build of fluid in the abdomen) caused by EpCAM-positive carcinomas is drainage of the ascites through:

- repeated large-volume paracentesis (LVP) using a temporary catheter, or
- an indwelling peritoneal catheter (IPC) that can be left in place for prolonged periods to allow ongoing drainage.

Catumaxomab is a treatment that would be delivered into the abdominal cavity (intraperitoneal).

Evidence from a clinical trial suggests that people who have catumaxomab after an initial LVP have longer before needing another LVP than people who have LVP alone. How long people live after having catumaxomab after an LVP compared with LVP alone is uncertain. The clinical evidence is also uncertain because:

- the trial was done over 20 years ago in a different population and clinical context to current NHS practice
- there is no evidence comparing catumaxomab with IPC
- it is likely that catumaxomab would be delivered using an IPC in the NHS but this was not done in the trial.

Because of the uncertainties in the clinical evidence, there are uncertainties in the economic model. The model structure is not appropriate for decision making because:

- it does not accurately capture potential benefits of catumaxomab
- it does not compare catumaxomab with IPC
- there is uncertainty about how catumaxomab would be used in the NHS.

Because of the uncertainties in the clinical and economic evidence it is not possible to determine the most likely cost-effectiveness estimates for catumaxomab without further evidence and analyses. So, catumaxomab should not be used.

2 Information about catumaxomab

Anticipated marketing authorisation indication

2.1 This draft guidance is being issued for consultation before catumaxomab (Korjuny, Pharmanovia) has a marketing authorisation for this indication in the UK. Any recommendations or conclusions in this document are provisional and dependent on the granting of a marketing authorisation by the Medicines and Healthcare products Regulatory Agency (MHRA). The

evaluation and consultation processes do not pre-empt, influence or replace the MHRA's independent regulatory assessment. Final guidance will only be published when a marketing authorisation is granted.

Dosage in the marketing authorisation

2.2 The dosage schedule will be available in the summary of product characteristics for catumaxomab.

Price

2.3 Catumaxomab costs £2,070.36 for a pack of 3 pre-filled syringes of 10 microgram concentrate for solution for infusion, and £13,802.40 for a pack of 4 pre-filled syringes of 50 microgram concentrate for solution for infusion (company submission, excluding VAT).

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

Sustainability

2.5 Information on the Carbon Reduction Plan for UK carbon emissions for Pharmanovia will be included here when guidance is published.

3 Committee discussion

The evaluation committee considered evidence submitted by Pharmanovia, a review of this submission by the external assessment group (EAG), and responses from stakeholders. See the committee papers for full details of the evidence.

The condition

Details of the condition

3.1 Malignant ascites is the build-up of fluid in the abdomen (peritoneal cavity) caused by locally advanced or metastatic cancer. The cancer causes ascites to develop through several mechanisms including:

- substances released by cancer cells causing the blood vessels to leak fluid into the abdomen
- cancer cells that have spread to the lining of the abdomen (peritoneum) blocking the normal drainage of fluid, causing fluid build-up in the abdomen.

Epithelial cellular adhesion molecule (EpCAM) is a protein involved in cell proliferation and differentiation that is produced by many epithelial cancers (carcinomas). Malignant ascites is most commonly associated with cancers originating in the ovary, pancreas, gastrointestinal tract, liver, gallbladder and bile ducts. It can also occur with breast, lung and prostate cancers. It is estimated that most malignant ascites is caused by EpCAM-positive cancer (85%). There are approximately 519 cases of malignant ascites each year in England from EpCAM-positive cancers. At the committee meeting, the clinical experts stated that malignant ascites is common in people with epithelial cancers in the abdomen. They noted that around 50% of people with gastrointestinal cancers may develop malignant ascites.

People with malignant ascites may experience pain, breathlessness, fatigue, and a loss of mobility and appetite. These symptoms can have a detrimental impact on quality of life. Malignant ascites is often associated with poor prognosis, however this can vary significantly between different cancer types. This is because malignant ascites is a sign of advanced cancer, when the cancer has spread to the abdomen. Living with malignant ascites can be distressing for the person with cancer and their family members. The patient expert at the committee meeting highlighted that malignant ascites causes discomfort and impacts daily life, including mobility and appetite. They explained that they had particularly struggled with the pressure that the fluid build-up puts on the bladder, which may lead to uncontrolled urine leakage. A clinical expert noted that it is not uncommon for 7 to 8 litres of fluid to have accumulated. The committee

concluded that malignant ascites can substantially affect health-related quality of life (HRQoL).

Treatment pathway

Treatment options

3.2 There are no licensed treatments in the UK for malignant ascites caused by EpCAM-positive carcinomas. Treatment of malignant ascites focuses on symptoms and aims to relieve abdominal distension, discomfort and associated symptoms. One treatment option is large volume paracentesis (LVP), a procedure that involves fitting a temporary catheter in the peritoneal cavity to drain the accumulated fluid. For people with recurrent ascites, this procedure needs repeating many times. Another treatment option is an indwelling peritoneal catheter (IPC), which involves surgically fitting a permanent catheter into the abdomen to allow regular drainage of the accumulated fluid. NICE health technology guidance 282 recommends the PeritX peritoneal catheter drainage system, an IPC device, for drainage of treatment-resistant, recurrent malignant peritoneal ascites.

Patient expert submissions noted that LVP can be painful and time consuming, with 1 patient expert stating that their procedure lasted 6 hours. They said that, given the limited life expectancy and reduced quality of life associated with malignant ascites, frequent hospital visits for LVP can be burdensome for both patients and their families. However, the patient expert at the committee meeting said that their experience of having a LVP was not painful or uncomfortable, and it provided a huge sense of relief. Patient expert submissions highlighted that IPCs, which are managed at home, can also be a burden to themselves or family members. For example, some people may have such a large volume of accumulated fluid that they have lost mobility and may not be able to drain the fluid themselves. A clinical expert at the committee meeting noted that some people may be reluctant to have an IPC fitted because of the associated discomfort. It was also noted that IPCs may cause infection.

However, they explained that an IPC allows people to manage their condition at home by draining ascitic fluid at a convenient time. The committee noted that current treatment options can provide short-term symptom relief, but they can also be burdensome and have a substantial impact on quality of life. It concluded that there is an unmet need for a treatment that addresses the underlying cause of malignant ascites.

IPC usage

3.3 The company positioned catumaxomab as a second-line treatment option for malignant ascites caused by EpCAM-positive carcinomas in adults who are no longer eligible for systemic anticancer treatment (SACT). It assumed that LVP would be the first-line treatment after becoming ineligible for SACT. The company proposed testing the fluid obtained from this first LVP for EpCAM positivity and introducing catumaxomab at the time of the first recurrence. At second line, the company assumed that LVP alone would be the comparator for catumaxomab. It did not include IPCs as a comparator or as a possible subsequent treatment after catumaxomab. It stated that IPCs are only used by a specific subgroup of people with rapidly accumulating ascites for whom management in the community is suitable. The company referenced a real-world evidence (RWE) study (Seah et al. 2022) that found that 79% of people had a LVP procedure and 21% of people had an IPC fitted to treat malignant ascites in a palliative care setting. The company also noted that there was no data available to compare catumaxomab with an IPC in the target population. It explained that, at the time the trial was done, IPCs were not standard clinical management. The EAG noted that there is no single defined point in the treatment pathway at which an IPC is offered. It said that, in clinical practice, fitting an IPC is typically considered after a person has had 2 or more LVPs. The EAG's clinical experts estimated between 10% to 40% of people would have an IPC fitted if they have had 2 to 3 LVPs. So, the EAG thought that IPC was a relevant comparator and subsequent treatment for malignant ascites.

A clinical expert at the committee meeting agreed that an IPC is a relevant treatment option and is thought to be standard care. They stated that almost 100% of people would have an IPC fitted to manage recurrent malignant ascites. They also explained that it is likely that people with malignant ascites will have had their ascites drained before becoming ineligible for SACT. This is to provide supportive care earlier in the pathway. So, people could have already had multiple LVPs earlier in the pathway, which would bring forward the fitting of an IPC, making it a relevant comparator. In some cases, IPCs could already be in place before treatment with catumaxomab. The NHS England representative confirmed that most people with recurrent malignant ascites would have an IPC fitted. The committee noted that supportive care could enable catumaxomab to be used at first line after stopping SACT. But it was uncertain when EpCAM testing would occur if catumaxomab was given at first line. So, the committee concluded that there is uncertainty around both the positioning of catumaxomab and the timing of EpCAM testing. The committee also concluded that an IPC is an appropriate comparator for catumaxomab. But it acknowledged that clinical expert opinions on the proportion of people that have an IPC fitted in NHS clinical practice varied from 10% to almost 100%. So, the committee decided that further evidence on IPC use in the NHS for people with recurrent malignant ascites was needed.

Method of administration of catumaxomab

3.4 The company submission reported that catumaxomab is given as a single course of treatment with 4 intraperitoneal infusions over 10 days. The interval between infusions can be prolonged if there is treatment toxicity, but the infusions should be completed within 21 days. Some people may not complete the full treatment course because of treatment toxicity or their clinical condition. The clinical expert noted that, in clinical practice, many people may not complete the catumaxomab treatment course in 10 days. The committee noted the 4 intraperitoneal infusions and that each involves 750 ml of sodium chloride. It thought that this would result

in a substantial treatment burden, including multiple hospital trips, treatment-related toxicities and feeling bloating, in a population with poor HRQoL and prognosis. At the committee meeting, the company explained that, in the trial, catumaxomab was administered through a temporary catheter. This was inserted before the first catumaxomab infusion and remained in place for the duration of the treatment course. The catheter was removed after completing the treatment course or at 21 days (whichever occurred first). A clinical expert explained that, in clinical practice, an IPC would be fitted to administer catumaxomab rather than fitting a temporary catheter for the treatment course. The clinical expert stated that the IPC would likely stay in place after the treatment course given the ongoing risk of fluid accumulation in this population. But they explained that catumaxomab may enable earlier IPC removal, although this would require monitoring and case-by-case decision-making. The clinical expert stated that IPCs can be long term and can last for the lifetime of a patient. They explained that, in clinical practice, malignant ascites almost always recur and so most people do not remove or change their IPC. Very occasionally, when treatment is successful, or there are IPC related complications, some people may remove the IPC. The clinical expert also explained that it is preferable to minimise the removal and reinsertion of an IPC. This is because this procedure is unpleasant and can have a considerable impact on quality of life for people whose condition is at a palliative stage (see section 3.2). They noted that the main potential benefit of catumaxomab compared with an IPC alone is likely to be earlier removal of the IPC. The committee thought it was unclear from the company's submission whether it assumed that catumaxomab administration would be through a temporary catheter as in the trial or through an IPC that would remain in place after treatment.

The committee recalled that there was uncertainty about the proportion of people with malignant ascites that currently drain their ascites through LVP or an IPC (see section 3.3). It noted that some people might prefer to

avoid an IPC because of the associated impact on quality of life. The committee thought that catumaxomab might offer the greatest benefit in people who need repeated LVP procedures because they decline IPC insertion. But because catumaxomab would likely be administered through an IPC in NHS clinical practice, and the IPC may remain in place after treatment, it is unclear whether these people would choose to have catumaxomab. Also, people would not be able to have catumaxomab if IPC insertion is unsuitable for them. This treatment pathway was not captured in the evidence presented and is likely to affect the cost effectiveness in both the repeated LVP and IPC comparator populations.

The committee acknowledged that if catumaxomab enables IPC removal and prolongs the time before another IPC is needed, this could represent a benefit of catumaxomab. But it highlighted that the infusion of catumaxomab is time consuming, requires multiple hospital visits and can have significant side effects. It noted that there was no clinical trial evidence on outcomes related to IPCs, such as the duration of IPC placement after catumaxomab infusion or time to reinsertion. The committee also had no information on real-world IPC use in the NHS, including how many IPCs the relevant cohort would expect to have over time. So, whether catumaxomab, administered with an IPC, was beneficial compared with an IPC alone was unclear. Nor was it clear whether people who currently choose not to have an IPC would choose to have catumaxomab if it is delivered through an IPC. The committee invited the company to consider the benefit that catumaxomab would provide in the current NHS setting.

Clinical effectiveness

AC-01 clinical trial

3.5 The clinical-effectiveness evidence for catumaxomab came from AC-01, a phase 2 to 3, multicentre, international, randomised, open-label trial (which included UK centres). It compared catumaxomab treatment

(n=170) with LVP (n=88) in adults with histologically confirmed EpCAM-positive carcinomas who had:

- symptomatic malignant ascites that required therapeutic puncture
- a life expectancy of at least 8 weeks
- a Karnofsky Index (KI) score of 60 or more.

The trial population enrolled people with ovarian cancer (50%) and non-ovarian epithelial cancers (50%). The trial was done between September 2004 and November 2006. People who had catumaxomab had LVP on day 0 followed by 4 escalating intraperitoneal catumaxomab doses through a catheter on days 0, 3, 7 and 10 (10, 20, 50 and 150 micrograms, respectively). Residual fluid was drained before each infusion. The catheter was removed after the final catumaxomab infusion. People in the LVP arm had an LVP on day 0. Subsequent LVP was permitted based on investigator assessment throughout the trial in addition to the signs and symptoms of malignant ascites. People in the LVP arm could cross over to the catumaxomab arm if they had at least 2 LVPs after day 0. Those who crossed over (52%) were censored at the date of their first catumaxomab infusion.

The primary endpoint was puncture-free survival and key secondary outcomes included overall survival (OS), time to next puncture and quality of life measures. Puncture-free survival was defined as the time to first therapeutic puncture or death, measured from complete fluid drainage from day 0 in the LVP arm and 1 day after the final infusion (planned on day 11, but up to 21 days) in the catumaxomab arm. At the May 2007 data cut, catumaxomab significantly prolonged median puncture-free survival compared with LVP alone in the intention-to-treat (ITT) population and the primary tumour subgroups (ovarian and non-ovarian epithelial cancers):

- ITT population: median puncture-free survival, 46 days versus 11 days (hazard ratio [HR] 0.254, 95% confidence interval [CI]

0.185 to 0.350, p<0.0001. This represents a 75% reduction in the risk of subsequent punctures)

- ovarian cancer: median puncture-free survival, 52 days versus 11 days (HR 0.205, 95% CI 0.129 to 0.327, p<0.0001)
- non-ovarian epithelial cancers: median puncture-free survival, 37 days versus 14 days (HR 0.309, 95% CI 0.199 to 0.482, p<0.0001).

At the May 2007 data cut, catumaxomab did not show a statistically significantly improvement in median OS (with censoring applied at crossover) compared with LVP alone in the ITT population and the primary tumour subgroups:

- ITT population: median OS, 72 days versus 68 days (HR 0.723, 95% CI 0.498 to 1.048, p=0.085)
- ovarian cancer: median OS, 110 days versus 81 days (HR 0.650, 95% CI 0.357 to 1.183, p=0.154)
- non-ovarian: median OS, 52 days versus 49 days (HR 0.825, 95% CI 0.514 to 1.324, p=0.423).

A sensitivity analysis without censoring at crossover (n=46) showed that, in the ITT population, catumaxomab did not show a statistically significant improvement in median OS compared with LVP alone (72 days versus 71 days; HR 0.795, 95% CI 0.602 to 1.050; p=0.1036). At the September 2009 data cut (with censoring applied at crossover), catumaxomab did not show a statistically significant improvement in median OS compared with LVP alone (72 days versus 68 days; HR 0.718, 95% CI 0.495 to 1.041, p<0.0783).

AC-03 clinical trial

3.6 The company submitted supporting clinical evidence from AC-03, a phase 3b, randomised, open-label trial. It was done across 10 European countries but did not include the UK. It enrolled adults with histologically confirmed epithelial cancer and malignant ascites who needed LVP and

had a life expectancy of at least 12 weeks. The trial compared catumaxomab with LVP against catumaxomab with prednisolone and LVP. The company noted that only data from the catumaxomab group was relevant to this submission. Trial outcomes included composite safety score and puncture-free survival (co-primary endpoints) and OS as a secondary endpoint. The company noted that because the superior safety endpoint was not met, the puncture-free survival endpoint of non-inferior efficacy was not formally tested. People who had catumaxomab had a median OS of 86 days (95% CI 72 to 126 days).

Pooling AC-01 and AC-03

3.7 The company pooled data from AC-01 with the control arm of AC-03 to inform clinical outcomes in the economic model. It explained that pooling increased the sample size and provided longer follow-up data. The company adjusted and combined the data from both trials to better align the populations, then compared this with the original AC-01 catumaxomab and LVP arms to estimate inter-trial hazard ratios. These hazard ratios were then used in the economic model to adjust the AC-01 catumaxomab treatment effect, incorporating evidence from AC-03. The EAG highlighted that AC-03 included people who had a prognosis of at least 12 weeks, whereas AC-01 required a prognosis of at least 8 weeks. It noted that this prognostic variable was not adjusted for in the company analysis. It also noted that the company's clinical experts confirmed that the AC-01 population was similar to the population that would have catumaxomab in England. So, the EAG did not see the benefit of including the AC-03 trial data and preferred to use only the AC-01 data to inform clinical outcomes. The committee noted that the AC-03 trial population does not match the decision problem for this evaluation, limiting the relevance of this data. The committee decided it could not conclude what clinical data is the most appropriate to use until uncertainties in the treatment pathway had been resolved, including the most relevant comparator and any additional clinical evidence (see sections 3.3 and 3.4).

Generalisability of the trial evidence

Trial populations

3.8 The EAG raised concerns about the generalisability of the trial. The company acknowledged that AC-01 was completed over 20 years ago. It stated that treatment for malignant ascites has remained the same since the trial, but the treatment of the different underlying types of cancer has changed. So, the baseline characteristics of people enrolled in the trial may differ to those in NHS clinical practice today. The company said it was plausible that catumaxomab would have a greater treatment effect than that observed in the trial because patient treatment history, expected survival, performance status and age are different. For example, the company highlighted that the use of bevacizumab and poly-ADP ribose polymerase (PARP) inhibitors for treating ovarian cancer increases performance status. To support this, it presented a RWE study, CARMA (Kurbacher et al. 2013), which found that people with a better performance status (KI score 80 to 100) had a significantly longer median OS after catumaxomab than people with a worse performance status. The EAG clinical expert agreed that there had been substantial advances in cancer treatments over the past 20 years, with many more effective and better tolerated treatment options. For example, there are over 10 lines of treatment for ovarian cancer, which results in an increased life expectancy. So, compared with AC-01 participants, people who become ineligible for SACT and could be eligible for catumaxomab are likely to be older, frailer and had more previous treatment. The EAG noted that the mean age of participants in AC-01 (58 years) and AC-03 (62 years) was lower than that typically seen in NHS clinical practice. It highlighted a UK RWE study (Mullan et al. 2015) that evaluated the use of IPC in people with malignant ascites and reported a median age of 66 years. A second RWE study (Seah et al. 2022), an international study including sites in England evaluating paracentesis in people with malignant ascites, reported a median age of 69 years. The EAG also noted that the trials enrolled a high proportion of White participants, whereas the population in

the NHS is expected to be more ethnically diverse.

The EAG also highlighted that 50% of participants in AC-01 had ovarian cancer. It considered that this proportion is not representative of the underlying tumour types observed in people with malignant ascites in NHS clinical practice. The EAG's clinical expert said that the tumour population that causes malignant ascites is more heterogeneous than seen in AC-01. The EAG noted that RWE suggests that malignant ascites commonly arises from pancreatic, colorectal, breast and lung cancers, with ovarian cancer representing a smaller proportion than in AC-01. Mullan et al. (2015), a single-centre UK-based study, reported that the largest proportion of people having IPC for malignant ascites had pancreatic cancer (13 of 50), compared with 8 of 50 who had ovarian cancer. Similarly, Jackson et al. (2021), a single-centre UK-based study, found that 50% of people who had an IPC fitted for recurrent malignant ascites had gastrointestinal cancer, compared with 17% who had ovarian cancer. The EAG highlighted that tumour types associated with poorer prognosis, such as pancreatic, lung and colorectal cancers, are likely underrepresented in AC-01. It was concerned that the treatment effect of catumaxomab may be overestimated because people with ovarian cancer had better outcomes in AC-01 than non-ovarian epithelial cancers (see section 3.5). The clinical expert stated that the proportion of people with each primary cancer type in the NHS may differ to the trial. The committee noted the better outcomes in the ovarian cancer subgroup and that this represented half of the ITT population. So, the overall treatment effect for catumaxomab could be overestimated. The committee concluded that the population in the trial is likely to differ from that in the NHS. This significantly limits the generalisability of the trial results to the NHS, so it is highly uncertain how applicable the findings are to the NHS population. This is in addition to the concerns about differences to the way catumaxomab would be delivered in the NHS (IPC) compared with how it was delivered in the trials (see section 3.4). The committee requested

additional evidence on the characteristics of people with malignant ascites who have LVP or IPC in NHS clinical practice and would be eligible for catumaxomab, including age, ethnicity, comorbidities and primary cancer type.

Subsequent systemic anticancer treatment

3.9 In AC-01 and AC-03, people were allowed to have further SACT. In AC-01, more people who had catumaxomab had subsequent SACT compared with people in the LVP group. In AC-03, 32% of people who had catumaxomab had further SACT. The EAG highlighted that this is not aligned with the proposed positioning of catumaxomab, which is for people who are no longer eligible for SACT (see section 2.1 and section 3.2). It was concerned that OS and puncture-related benefits were overestimated for the intended positioning of catumaxomab. It highlighted that people having catumaxomab had more post-treatment systemic treatments compared with people having LVP alone, and that subsequent SACT is a prognostic factor likely to improve OS and puncture-free survival (Kurbacher et al. 2015). The company explained that the trial recruited people who were no longer eligible for SACT. It said the findings suggest that treatment with catumaxomab enabled people to become fitter and increased their performance status, potentially enabling them to become re-eligible for further SACT. The company's clinical experts considered this bridge to further SACT treatment a potential benefit of catumaxomab that would be highly valuable in clinical practice. The clinical expert at the committee meeting supported this. They explained that often people can become ineligible for SACT because of their malignant ascites. Once the ascites is drained, people typically feel better, their performance status increases, and people could have further SACT. The committee questioned whether this would also happen after the ascites is drained without catumaxomab. The clinical expert explained that catumaxomab is different because it is a targeted treatment for EpCAM-positive tumour cells in malignant ascites. This means that it may provide a better level of disease control, potentially enabling some people

to become eligible for SACT again. The clinical expert said that there are now more effective treatments available to treat advanced stage and metastatic cancer, which could improve OS, but that it would be difficult to determine the extra benefit that further treatment provides. The committee concluded that ascites resolution with catumaxomab may improve performance status in some people and enable further SACT. But, the proportion of the population in which this would occur and the benefits associated with any subsequent SACT in a late-stage cancer population are uncertain. The committee noted that subsequent treatment use was partially captured in the economic modelling through inclusion of OS (see section 3.10), but this impact was uncertain. The costs of further SACT were not captured, so it requested that subsequent treatment use is explored in the model.

Effect of catumaxomab on overall survival

3.10 The company stated that catumaxomab provided an OS benefit compared with LVP (see section 3.5). The EAG noted that the OS benefit was small and uncertain because people were censored at the point of crossover in AC-01. The company acknowledged that the OS for catumaxomab is potentially impacted by crossover. It explained that people who crossed over were likely to have a poorer prognosis than those who were initially enrolled in the catumaxomab arm, because they had 2 additional LVP procedures. The EAG disagreed and explained that people who switched to catumaxomab treatment were likely to be healthier. This is because to be eligible to crossover, participants must have met the original AC-01 eligibility criteria (such as expected to live more than 8 weeks). So, those who did not switch likely had a worse prognosis and informed the follow-up data in the LVP arm. The EAG noted that people who switched treatments were censored from the OS analysis, and this makes it difficult to determine the magnitude and direction of the crossover effect on OS estimate. The committee recalled that the OS analyses with and without censoring for crossover did not show a statistically significant improvement for catumaxomab compared with LVP alone. The committee

noted that the trial estimated a non-significant OS benefit of only several days. It recalled other uncertainties with the OS estimates, including:

- The population in the trial (done more than 20 years ago) may not have the same characteristics as the population who would have treatment in the NHS, so the results from the trial may not be generalisable (see section 3.8).
- There was uncertainty about the biological plausibility of catumaxomab significantly improving OS in people with late-stage metastatic cancer with an average life expectancy of some months.
- The relative OS treatment effect for catumaxomab with an IPC compared with an IPC alone, a relevant comparator in this evaluation, was not presented (see section 3.3 and section 3.5).
- The trial permitted subsequent treatments (see section 3.9) and since the trial there are more effective treatments available in the NHS to treat advanced stage and metastatic cancer.

The committee concluded that any OS benefit for catumaxomab was highly uncertain and it had not seen any convincing quantitative evidence showing this in the current NHS population.

Unclear puncture-free survival benefit of catumaxomab

3.11 The company stated that catumaxomab had significantly slowed the build-up of fluid, delayed symptom onset and reduced burden, compared with LVP alone. The EAG highlighted that the puncture-free survival estimates were subject to bias because of the open-label design of the trial. It said that the decision to have an LVP was led by the participant. So, there could be motivation to have 2 subsequent LVP procedures sooner to allow crossover to the catumaxomab arm. The company explained that to reduce bias from the open-label design, a protocol amendment was introduced which established a criteria for crossover. This included:

- 2 LVPs before crossover
- ascites fluid had to be at least 1 litre, estimated by a CT scan

- LVP requests had to be based on signs and symptoms of malignant ascites.

The EAG was also concerned that censoring took place at 7 months in the puncture-free survival analysis for those who were event free. This means that for those who had not yet had an LVP, their total time puncture-free was not captured in the analysis. This may cause bias against catumaxomab and underestimate the treatment effect of catumaxomab for puncture-free survival. The committee noted that data on the numbers at risk over time was not presented, which would have improved interpretability of the puncture-free survival and OS analyses (see section 3.5). In addition, it would have been helpful to have clearer information on when crossover occurred and the extent to which it may have influenced the results. The company stated that there was limited information available about people who crossed over.

The committee acknowledged that the puncture-free survival benefit observed in trials was plausible but may have been overestimated because of various trial limitations as noted by the EAG. It discussed that an improvement in puncture-free survival could be beneficial to those who would otherwise have a repeated LVP procedure. But it recalled that IPC is also a comparator to catumaxomab and that the benefits of a delayed puncture do not apply to this population because the catheter is permanently fitted (see section 3.4). The committee also considered that puncture-free survival benefit may not translate into NHS practice if catumaxomab is administered through an IPC that remains in place. This is because the IPC would eliminate the need for further LVPs. The committee thought that the AC-01 puncture-free survival results were subject to uncertainty and it was unclear about whether there was any puncture-related benefit of catumaxomab in the IPC population. It also highlighted that the 1-litre threshold to have an LVP in the trial was low compared to other studies, such as Jehn et al., 2015 which stated 61% of people had 3 to 5 litres drained during paracentesis. It concluded that it

could not draw any useful conclusions on puncture-free survival benefit until it has considered more evidence that addresses concerns about:

- the appropriate comparator
- treatment administration, and
- treatment positioning in the pathway.

The committee noted that it would welcome further evidence on the health benefits of catumaxomab compared with IPC.

Economic model

Model structure

3.12 To model the cost effectiveness of catumaxomab compared with LVP, the company used a partitioned survival model with 3 health states: ‘stable HRQoL’, 'deteriorating HRQoL' and 'death'. The company chose a cycle length of 1 day and a lifetime time horizon of 5 years. Health state occupancy was informed by the outcome measure time to first deterioration of quality of life (TFDQ). The company stated that it preferred to use TFDQ to determine health state occupancy because it has a more direct implication for HRQoL and is more informative for resource utilisation. The EAG had concerns about using TFDQ to inform health state occupancy. It explained that TFDQ only captures the point at which HRQoL first worsens, rather than absolute HRQoL changes over time, and censors both death and puncture events. Because the model assumes that people remain in a ‘stable HRQoL’ state until deterioration, this likely overestimates time spent in better health and the benefits of catumaxomab. The EAG therefore considered that TFDQ was unsuitable for informing health state occupancy. The EAG also noted that HRQoL was not linked to puncture events in the model, the main clinical benefit of catumaxomab, while puncture-free survival (the primary outcome), only informs subsequent puncture timing and costs (see section 3.17).

In its base case, the EAG removed TFDQ and instead modelled health state occupancy using a time-to-death approach. The model included 3 health states: 'more than 91 days from death', '91 days or less from death', and 'death'. This approach used the OS curve and time-to-death data from AC-01, incorporating all available utility observations across both treatment arms to inform health state occupancy. The proportion of people who were 'more than 91 days from death' was used to inform the 'stable HRQoL' state occupancy and with shorter time-to-death categories (1 to 7 days, 8 to 30 days, and 31 to 91 days) informing the 'deteriorating HRQoL' state. The EAG noted that this approach uses larger and more robust utility data that is consistent with the time-to-death health states, and more accurately represents absolute HRQoL and its expected decline as people approach death. The committee noted that the company model does not capture the proposed benefits of catumaxomab compared with LVP, does not track changes in HRQoL as people progress through the model and does not allow for improvement of HRQoL. It thought that the EAG's approach tried to link puncture events with HRQoL and capture the changes in HRQoL over time. But the ability to do this was limited by the available evidence. It noted that both the company's and EAG's approaches did not appropriately model a cost-effectiveness analysis comparing catumaxomab with IPC. The committee concluded that it preferred the EAG's approach to modelling the comparison of catumaxomab with LVP. But it noted that it may be appropriate to change the model to better capture the benefits of catumaxomab compared with IPC, although evidence to support such changes may be limited (see section 3.3).

Health state utility values

3.13 Health state utility values (HSUV) were derived from additional analyses of AC-01 patient-level EORTC QLQ-C30 data. For the 'stable HRQoL' health state, the company's model applied treatment-specific HSUV (0.730 and 0.621 in the catumaxomab and LVP arms, respectively). This was informed by AC-01 HRQoL observations that were more than

200 days from death. The company explained that it chose a threshold of 200 days because at this time point, the TFDQ Kaplan–Meier plot for catumaxomab had reached zero hazard. It assumed that, after this point, people had a stable HRQoL. For the 'deteriorating HRQoL' health state, the company used time-to-death utilities, which aimed to capture the decline in HRQoL as people become closer to death. HSUVs were broken down into 4 time-to-death groups and applied equally to the catumaxomab and LVP arms:

- more than 91 days from death (0.628)
- 31 to 91 days from death (0.469)
- 8 to 30 days from death (0.398)
- 0 to 7 days from death (0.149).

For the 'stable HRQoL' health state, the EAG thought that the evidence for a difference in utility values between the stable state (more than 91 days from death) treatment arms was limited. This was because it was based on small sample sizes and not adjusted for puncture-free survival. It also noted that HSUVs were calculated from people who were more than 200 days from death, but were applied universally, regardless of how long someone lived for. It highlighted that the company's justification for the 200-day cut-off was unclear, noting that it was based on TFDQ plateauing 200 days from randomisation, but was then applied as 200 days from death. The EAG decided that there was no robust evidence to support a difference in utility values in the stable state between treatment arms. So, in its base case, the EAG assumed equal utility values for both catumaxomab and LVP (0.628) for the health state 'more than 91 days from death'. This was based on the time-to-death utility value for 'more than 91 days from death' because it was very similar to the LVP 'stable HRQoL' value (0.628 versus 0.621) and aligned with the time-to-death approach used in its model structure. The remaining model HSUV values were based on the other time-to-death categories. The committee highlighted the benefits of catumaxomab were still not

accurately captured because the HRQoL outcome was still not adequately captured. It stated that puncture frequency and time to death does not adequately capture this. The committee noted that neither the company's nor the EAG's model represented IPC use in the NHS, so are not fit for purpose. It recalled its conclusion that it may be appropriate to change the model to better capture the benefits of catumaxomab compared with IPC (see section 3.12). The committee concluded that it would like to see a model that better reflects the current treatments used in the NHS and the expected impact on HRQoL.

Disutilities

3.14 The company did not include any disutilities related to adverse events or punctures in its economic model. It said that any longer-term events would be captured in the AC-01 HRQoL data. For short-term events, the company explained that since AC-01, clinical experts said that cytokine release syndrome (CRS), a common adverse event of catumaxomab, is better managed and there would be a reduced number of events. So, the company thought there would be no meaningful quality-adjusted life year (QALY) impact. The EAG thought that people may have temporary reductions in their quality of life from the catumaxomab infusions and from puncture events. It noted that these were not considered in the company's model because of their short-term nature. In its base case, the EAG applied 3 disutility values in its model:

- utility value of 0 for 4.3 days for CRS grade 3 and above events
- utility value of 0 for 1 day for the first catumaxomab infusion to reflect the lengthy infusion time and catheter-related process
- utility value of 0 for 1 day for punctures based on the proportion of adverse events related to punctures.

The committee also noted that the main benefit of catumaxomab compared with LVP is the avoidance of a puncture event, which is associated with disutility. So, it thought that the EAG's approach to

disutilities was more appropriate for the comparison with LVP, but this also had limitations. The committee thought that, for people with an IPC, a disutility for puncture events would not be relevant. It recalled the substantial treatment burden of catumaxomab, including infusion time, outpatient visits, and toxicities such as CRS and post-infusion bloating (see section 3.4). It thought that capturing the associated disutility was important, particularly when comparing catumaxomab with an IPC. The committee concluded that would like to see a model that better reflects the current NHS treatment pathways and administration, including IPC use, and the initial burden of catumaxomab infusions (see section 3.12).

Modelling puncture-free survival

3.15 To model puncture-free survival in the ITT population, the company fitted independent exponential curves to each treatment arm, using the data cut from AC-01. To incorporate the evidence from AC-03, it applied an inter-trial hazard ratio of 0.994 to the catumaxomab arm (see section 3.7). The EAG base case fitted an independent log-logistic model for both arms using the data from AC-01 only. The EAG selected this as a more optimistic extrapolation to account for the potential bias against catumaxomab from censoring the analyses at 7 months (see section 3.11). The committee recalled that there was uncertainty in the puncture-free survival data and the most appropriate model structure (see section 3.12). The committee concluded that it could not decide on its preferred modelling approach without further analyses.

Modelling overall survival

3.16 To extrapolate OS in the ITT population, the company fitted independent exponential models to both treatment arms, using the AC-01 May 2007 data cut that censored people at crossover. To incorporate the evidence from AC-03, it applied an inter-trial hazard ratio of 0.926 to the catumaxomab arm (see section 3.7). The EAG noted that using data that was censored at crossover likely underestimated survival for the LVP population because it does not fully capture outcomes after treatment

switching. It also highlighted that the company used the May 2007 data cut from AC-01 rather than the September 2009 data cut, but this would have had a small impact on the catumaxomab arm. The EAG noted that it would have preferred to use the September 2009 uncensored follow-up data, but that this was unavailable. In its base case, the EAG applied an independently fitted log-logistic model to obtain the long-term OS in the catumaxomab arm, using the AC-01 May 2007 data cut that does not censor crossover. For the LVP arm, the EAG used the inverse hazard ratio (1 divided by 0.795) from analyses without crossover censoring, applying this to the extrapolated catumaxomab OS curve, to estimate OS for LVP. The committee recalled that there was uncertainty in the OS data and the most appropriate model structure (see section 3.10 and section 3.12). The committee concluded that it could not decide on its preferred OS modelling approach without further analyses.

Frequency of subsequent punctures

3.17 In its model, the company captured the rate of subsequent punctures after puncture-free survival for the catumaxomab and LVP arms. It applied a treatment-specific time between subsequent puncture rate in the model, which was fixed. This was based on data collected in AC-01, defined as time from first on-study puncture (puncture-free survival) to first post-study puncture. The company noted that it did not use the data collected between subsequent punctures because the sample size was small and unreliable. For the LVP arm, the company excluded data from those who crossed over to catumaxomab. The EAG noted that applying a sustained treatment benefit for catumaxomab in terms of subsequent punctures is not consistent with the AC-01 data. It explained that, in the catumaxomab arm, the interval between punctures decreased over time in both the ovarian and non-ovarian subgroup. For the LVP arm, the time interval between subsequent punctures increased. The EAG's clinical expert agreed that it is unlikely that catumaxomab would have a sustained benefit. In the committee meeting, the company agreed that it may be optimistic to assume that the catumaxomab treatment benefit should

continue indefinitely but argued that it also should not stop immediately after the first puncture. The EAG base case assumed no ongoing benefit of catumaxomab, so applied an equal subsequent puncture rate in both arms. It also preferred to use all subsequent puncture data collected in AC-01, including that from people who crossed over in the LVP arm. The committee recalled that IPC was a comparator to catumaxomab (see section 3.3). It noted that a repeated puncture would not be a relevant outcome for this comparator and a reduced rate of subsequent puncture would only be considered a benefit if people have repeated LVPs. The committee remained unclear about the benefits of catumaxomab in the current NHS setting and whether these were sufficiently captured within the model. It concluded that it could not decide on its preferred approach for subsequent puncture rate until:

- uncertainties around the most relevant comparator were resolved and
- the model had been updated to appropriately reflect the benefits of catumaxomab.

Costs

Costs of EpCAM testing

3.18 The company submission stated that EpCAM testing for catumaxomab eligibility would happen after the first-line LVP procedure after stopping SACT (see section 3.2). It stated that EpCAM testing is already part of routine practice and would be covered under existing International Organization for Standardization (ISO)-compliant laboratory governance arrangements. The company explained that the test requires minimal consumables and approximately 5 to 10 minutes of microscopy time per sample. The summary of product characteristics for catumaxomab defines a positive EpCAM test as 400 or more EpCAM-positive cells per million ascites cells. The company considered EpCAM immunostaining to be a standard diagnostic technique and that applying the eligibility threshold for catumaxomab would not introduce additional processes or place a

substantial burden on NHS services. It estimated the incremental cost of an EpCAM test to be £49.81. The EAG noted that this price excludes several relevant costs, such as retesting and the costs associated with becoming ISO-compliant (for example, validation and verification involving quality control, documentation and staff time).

The NHS England submission confirmed that EpCAM testing is not routine and estimated the cost to be £100 per EpCAM test, in addition to 30 minutes of consultant time. A clinical expert at the committee meeting explained that EpCAM testing is currently used to diagnose carcinomas through qualitative identification of the presence or absence of EpCAM. It is not routine to quantify the number of cells that are EpCAM positive. They explained that, to introduce a quantitative EpCAM test, flow cytometry would likely be used to count the number of cells that are EpCAM positive. Flow cytometry would likely be done by a centralised service, which would incur an additional cost. A clinical expert at the committee meeting confirmed that introducing a new test would require guidelines from the Royal College of Pathologists. They also confirmed that the test does not have 100% sensitivity and that retesting would occur if a lengthy period of time had passed from the initial sample being taken to recurrence of malignant ascites. The committee understood that the test required to determine eligibility for catumaxomab was not routinely available in the NHS and the cost was currently unknown. It also raised concerns whether a centralised test would delay diagnosis. It thought that the cost estimated by the company likely underestimated the true cost to the NHS, including the potential cost of retesting. The committee concluded that further information is needed around the testing for catumaxomab eligibility and the cost to the NHS of introducing a new EpCAM test.

Drug administration setting

3.19 In AC-01, each catumaxomab infusion was administered in an inpatient setting. The company's model assumed that 80% of people would have

the first catumaxomab infusion in the inpatient setting and 20% as day cases. Subsequent infusions were assumed to be administered in either a day case or an outpatient setting. These assumptions were based on clinical expert opinion that the intensity of care and resources required reduces with every catumaxomab infusion. This largely reflects the recent advancements in the management of CRS. The first administration of catumaxomab requires paracentesis and the extent of any adverse event is unknown. Subsequent drainage times are comparatively shorter and less resource intensive because, if the treatment is effective, there is minimal fluid build-up in between infusions that require only a small volume paracentesis. The EAG highlighted that the company's modelling of the first catumaxomab infusion was different to the company's clinical expert opinion that stated that 100% of first infusions should take place in an inpatient setting with 24-hour observation. The EAG's clinical expert agreed with this advice. So the EAG assumed 100% inpatient admission for the first catumaxomab infusion with a 1-day length of stay. At the committee meeting, the NHS England representative confirmed that all initial catumaxomab infusions would be delivered as an inpatient procedure with 24-hour monitoring. A clinical expert at the committee meeting highlighted that the summary of product characteristics for catumaxomab specifies that the infusion takes approximately 3 to 6 hours to administer and that monitoring for CRS is required for 12 hours after the infusion. So, the first infusion of catumaxomab with subsequent monitoring is unlikely to take place as an outpatient procedure. They explained that the setting of subsequent catumaxomab infusions would depend upon the reaction a person had to the first infusion. But, an inpatient environment would likely be needed to identify and manage potential toxicity. They also highlighted that chemotherapy units do not have the facilities to deliver catumaxomab treatment.

In the company's and EAG's models, all LVP procedures were assumed to be administered as 80% inpatient and 20% day cases. The NHS

England expert also said that all LVP procedures or IPC insertions would be done in an ambulatory outpatient care setting (also known as supportive therapy units). They explained that LVPs require the person to be lying down in a hospital bed and that chemotherapy outpatient units do not have the facilities to support this. The committee concluded that the first infusion of catumaxomab would take place as an inpatient procedure and that the setting of subsequent catumaxomab infusions would depend upon the reaction a person had to the first infusion. It also concluded that all LVP and IPC procedures would take place in an ambulatory outpatient setting, not within a chemotherapy unit, and that it had not seen representative costs for this type of unit. It also highlighted that once an IPC is fitted, people can manage their drainage at home with a well-trained carer or a community nurse visit at home. The committee requested additional analyses on appropriate care setting and the associated resource use for catumaxomab, LVP and IPC in the NHS.

Adverse events

3.20 The company's model costed for CRS by accounting for CRS-related adverse events and managing CRS during the catumaxomab treatment period. The EAG highlighted that the proportions provided by clinical experts were not broken down by severity of CRS and noted that high-grade CRS events were associated with substantial costs because of hospitalisation and ICU admission. In its base case, the EAG applied a one-off cost in the catumaxomab arm for managing grade 3 and above CRS (8.9% incidence from AC-01), assuming 4.3 days in intensive care and treatment with tocilizumab. The committee recalled that there was uncertainty in the most appropriate comparator and therefore the model structure (see section 3.3 and section 3.12). The committee concluded that it could not decide on its preferred adverse event modelling approach without further analyses.

Severity

3.21 The committee considered the severity of the condition (the future health lost by people living with the condition and having standard care in the NHS). The committee may apply a greater weight (a severity modifier) to QALYs if technologies are indicated for conditions with a high degree of severity. The company provided absolute and proportional QALY shortfall estimates in line with NICE's technology appraisal and highly specialised technologies guidance manual. In its base case, the company applied a severity weighting of 1.7 to the QALYs. The absolute QALY shortfall was 13.94 and the proportional QALY shortfall was 0.99. The EAG base case produced an absolute QALY shortfall of 12.85 and a proportional QALY shortfall of 0.99, which also met severity weighting of 1.7. The committee concluded that it could not determine whether it is appropriate to apply a QALY weighting for severity until uncertainties in the clinical evidence and model structure were resolved.

Cost-effectiveness estimates

Company and EAG base-case assumptions

3.22 The company's and EAG's base-case probabilistic incremental cost-effectiveness ratios (ICERs) were above the range NICE considers a cost-effective use of NHS resources (£25,000 to £35,000 per QALY gained). The committee was unable to identify an acceptable ICER because further analyses were needed from the company.

Committees preferred assumptions

3.23 The committee concluded that IPC is a relevant comparator for catumaxomab (see section 3.3). But it had not been presented with any clinical-effectiveness or cost-effectiveness evidence for a comparison between catumaxomab and IPC. The committee concluded that, because of the many areas of uncertainty, it could not decide on its preferred assumptions and requested further analyses from the company (see section 3.24).

Additional analyses

3.24 The committee noted the many areas of uncertainty. It would like to see the following additional analyses and information:

- the proportion of people who have an IPC fitted compared with people who have repeated LVP procedures in NHS clinical practice (see section 3.3)
- when EpCAM testing would take place in the treatment pathway (see section 3.3)
- the proportion of people that would have catumaxomab administered through an IPC in NHS clinical practice (see section 3.4)
- the duration of IPC placement after insertion for catumaxomab administration and the proportion of IPCs that would be removed in NHS clinical practice (see section 3.4)
- the population that would have catumaxomab in the NHS and if there is a population who could have catumaxomab but would not opt for an IPC (see section 3.4)
- further evidence on the characteristics of people with malignant ascites who have LVP or IPC in NHS clinical practice and would be eligible for catumaxomab (see section 3.8)
- more evidence to support the OS benefit of catumaxomab (see section sections 3.9 and 3.10)
- further analyses to capture the rate of subsequent SACT and the associated costs and benefits of subsequent SACT (see section 3.9)
- an updated model structure that appropriately captures the benefits of catumaxomab compared with LVP and IPC, including puncture outcomes and quality of life changes over time (see sections 3.12 and 3.13)
- more evidence on HRQoL impact and patient preferences with regards to the different aspects of treatment for catumaxomab, LVP and IPC (see section 3.4 and section 3.13)

- the cost of introducing EpCAM testing in the NHS, including the costs associated with counting EpCAM-positive cells and the cost of retesting (see section 3.18)
- the resource use in the NHS, including the costs reflecting the most appropriate care setting for LVP and IPC (see section 3.19)

Other factors

Equality

3.25 The committee noted that malignant ascites may be more common in females than males because malignant ascites is more prevalent in ovarian cancer. The committee also considered that malignant ascites is associated with advanced or metastatic cancer and late-stage cancer is more common in people from socioeconomically deprived areas and people from Black, Asian or ethnic minority groups. Gender and race are protected characteristics under the Equality Act 2010. But because its recommendation does not restrict access to treatment for some people over others, the committee agreed these were not potential equalities issues.

Uncaptured benefits

3.26 The committee considered whether there were any uncaptured benefits of catumaxomab. The committee recalled that the current model did not capture the potential benefits of catumaxomab (see sections 3.12 to 3.14). So, it could not conclude whether there are any uncaptured benefits of catumaxomab.

Conclusion

Recommendation

3.27 The committee concluded that LVP and IPC are both relevant treatments for malignant ascites. The clinical-effectiveness evidence comparing catumaxomab with LVP was associated with substantial uncertainties because it was generated over 20 years ago in a different clinical

management landscape. But it was unclear whether people currently having repeated LVPs would have catumaxomab which requires an IPC. No clinical-effectiveness evidence was presented comparing catumaxomab with IPC and no evidence was presented accounting for the fact that catumaxomab is likely to require IPC insertion for treatment administration in the NHS. The committee did not see sufficient information on the relative treatment burden and patient preferences between the different treatment options. These limitations in the clinical evidence led to considerable uncertainty in the cost-effectiveness analyses. Based on the evidence presented, the committee was not able to determine the most likely cost-effectiveness estimates for catumaxomab. The committee has requested additional evidence (see section 3.24). So, catumaxomab could not be recommended.

4 Evaluation committee members and NICE project team

Evaluation committee members

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

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

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

Chair

Vageesh Jain

Chair, technology appraisal committee D

NICE project team

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

Alice Pritchard
Technical lead

Cara Gibbons
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Kate Moore
Project manager

Ross Dent
Associate director

ISBN: [to be added at publication]