

## Putting NICE guidance into practice

### **Resource impact report: Lenalidomide maintenance treatment after an autologous stem cell transplant for newly diagnosed multiple myeloma (TA680)**

Published: March 2021

## Summary

NICE has recommended lenalidomide as maintenance treatment after an autologous stem cell transplant for newly diagnosed multiple myeloma in adults, only if the dosage schedule is 10 mg per day on days 1 to 21 of a 28-day cycle and the company provides lenalidomide according to the commercial arrangement.

We estimate that:

- 1,170 adults with newly diagnosed multiple myeloma who have had autologous stem cell transplant are eligible for treatment with lenalidomide each year, and
- 1,110 people will have lenalidomide from year 2022/23 onwards once uptake has reached 95% as shown in table 1. Of the people starting treatment around 210 will discontinue each year.
- Around 1,830 people from previous years will have lenalidomide by 2025.

**Table 1 Estimated number of people in England receiving lenalidomide**

	2020/21	2021/22	2022/23	2023/24	2024/25
Uptake rate (%)	75	85	95	95	95
Population receiving lenalidomide each year	880	1,000	1,110	1,110	1,110
People continuing from previous years	0	710	1,260	1,650	1,830
People discontinuing	-170	-450	-720	-930	-1,040
<b>Total</b>	<b>710</b>	<b>1,260</b>	<b>1,650</b>	<b>1,830</b>	<b>1,900</b>

This report is supported by a local resource impact template because the list price of lenalidomide has a discount that is commercial in confidence. The discounted price of lenalidomide can be put into the template and other variables may be amended.

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

# 1 Lenalidomide

- 1.1 NICE has recommended lenalidomide as maintenance treatment after an autologous stem cell transplant for newly diagnosed multiple myeloma in adults, only if the dosage schedule is 10 mg per day on days 1 to 21 of a 28-day cycle and the company provides lenalidomide according to the commercial arrangement.
- 1.2 There is currently no maintenance treatment recommended by NICE for people who have had a first autologous stem cell transplant. People are not actively treated but monitored until the first relapse.
- 1.3 Lenalidomide can be given in all chemotherapy day units that treat multiple myeloma. Lenalidomide is taken orally and does not need a hospital visit. There is no need for additional infrastructure to be put in place and it will not affect patient monitoring compared with established clinical practice in England.

## 2 Resource impact of the guidance

- 2.1 We estimate that:
- 1,170 people adults with newly diagnosed multiple myeloma who have had autologous stem cell transplant are eligible for treatment with lenalidomide each year, and
  - 1,110 people will have lenalidomide from year 2022/23 onwards once uptake has reached 95% as shown in table 1. Of the people starting treatment around 210 will discontinue each year, and
  - around 1,830 people from previous years will have lenalidomide by 2025.
- 2.2 The current treatment and future uptake figure assumptions are based on NHSE clinical expert opinion and are shown in the

resource impact template. Table 2 shows the number of people in England who are estimated to have lenalidomide by financial year.

**Table 2 Estimated number of people having lenalidomide using NICE assumptions**

	2020/21	2021/22	2022/23	2023/24	2024/25
Uptake rate (%)	75	85	95	95	95
Population receiving lenalidomide each year	880	1,000	1,110	1,110	1,110
People continuing from previous years	0	710	1,260	1,650	1,830
People discontinuing	-170	-450	-720	-930	-1,040
<b>Total</b>	<b>710</b>	<b>1,260</b>	<b>1,650</b>	<b>1,830</b>	<b>1,900</b>

2.3 This report is supported by a local resource impact template. The company has a commercial arrangement. This makes lenalidomide available to the NHS with a discount. The size of the discount is commercial in confidence. It is the company's responsibility to let relevant NHS organisations know details of the discount.

### ***Savings and benefits***

2.4 The technology delays further resource use by prolonging progression free survival post-transplant.

2.5 The clinical trial results showed that lenalidomide maintenance treatment improves survival and extends the time before first relapse compared with monitoring alone.

2.6 For people who relapse after a first transplant, further treatments would be received. These may be treatments that are currently given in NHS practice and Cancer Drugs Fund treatments. Assumptions around subsequent treatments are highly uncertain and so are not included in the model. Users can include costs of subsequent treatments avoided at a local level in the model.

- 2.7 Patient experts explained that lenalidomide is a well-tolerated treatment and that, during the ongoing coronavirus pandemic, it is particularly convenient. This is because it is taken orally and does not need a hospital visit.

### **3 Implications for commissioners**

- 3.1 This technology is commissioned by NHS England. Providers are NHS hospital trusts.
- 3.2 Lenalidomide falls within the programme budgeting category 02I – cancer, haematological.

### **4 How we estimated the resource impact**

#### ***The population***

- 4.1 In 2017, around 4,800 adults were diagnosed with multiple myeloma in England ([Office for National Statistics, England](#)).
- 4.2 Table 3 shows the number of people eligible for treatment with lenalidomide.

**Table 3 Number of people eligible for treatment in England**

Population	Proportion of previous row (%)	Number of people
Adult population in England <sup>1</sup>		44,022,560
Incidence of multiple myeloma <sup>2</sup>	0.01	4,800
Proportion of people with multiple myeloma who are actively treated <sup>3</sup>	90	4,320
Proportion of people who have autologous stem cell transplant <sup>4</sup>	27	1,170
Total number of people eligible for treatment with lenalidomide each year	100	1,170
Total number of people estimated to have lenalidomide each year from year 2022/23 <sup>5</sup>	95	1,110
<p><sup>1</sup> <a href="#">Clinical Commissioning Group Mid-Year Population Estimates - Office for National Statistics</a>, mid-year 2018 estimates.</p> <p><sup>2</sup> <a href="#">Cancer registration statistics 2017: ICD 10 diagnosis code C90.0</a></p> <p><sup>3</sup> NHS England clinical expert opinion</p> <p><sup>4</sup> <a href="#">British Society of Blood and Marrow Transplantation, 2019</a>. 1,482 autologous transplantations for MM in UK+Republic of Ireland. Proportioned to reflect England only</p> <p><sup>5</sup> NHS England clinical expert opinion and NICE clinical expert opinion.</p>		

## Assumptions

4.3 The resource impact template assumes that:

- Based on clinical expert opinion there is a high demand for lenalidomide maintenance treatment and clinicians are also aware of the treatment. Therefore, uptake is expected to be rapid and to include most of the eligible people, and
- there is currently no maintenance treatment after a first autologous stem cell transplant apart from monitoring. Therefore, best supportive care is the only comparator used in the model, and
- the average treatment duration, based on the average number of cycles each year for the first 5 years, is used to estimate the annual cost of treatment. This accounts for relapses, deaths, or withdrawals because of adverse events. Organisations should

consider the average annual duration of treatment at a local level, and

- treatment continues until disease progression or withdrawal and may extend beyond 1 year. The model estimates costs over a 5-year time horizon, and
- treatment costs were based on the recommended dosage being achieved and may not reflect practice. Organisations should consider the relative dose intensity and adjust accordingly, and
- the cost of lenalidomide includes an oral administration tariff of £127 per cycle (Healthcare resource group: SB11Z Deliver Exclusively Oral Chemotherapy). Taken from [NHS national tariff 2020/21](#). Lenalidomide is a well-tolerated treatment and because it is taken orally it may not need a hospital visit. Administration costs should be assessed locally and amended as necessary, and
- the relative dose intensity for lenalidomide maintenance treatment is 89%. The company used 86% to 87% and the ERG estimated 92%. A midpoint estimate is used, and
- the unit cost of best supportive care drugs and the associated administration/non-drug costs should be considered at a local level.

### ***Other factors***

- 4.4 The company has a commercial arrangement. This makes lenalidomide available to the NHS with a discount. The price paid locally can be input in blue cells in the resource impact template.
- 4.5 Lenalidomide prolongs progression free survival after autologous stem cell transplant and may reduce the cost of third or subsequent therapies after maintenance treatment. The cost has not been modelled because, based on NHS England clinical opinion and the appraisal committee, this is highly uncertain.

- 4.6 NHS England highlighted that the myeloma clinical pathway is changing and the use of lenalidomide for treatment of multiple myeloma in people who have received at least 2 prior therapies ([NICE technology appraisal guidance TA171](#)) will become less common as it is replaced by combination therapies, such as lenalidomide plus ixazomib and other new topics being appraised by NICE.
- 4.7 Also, the committee was aware that lenalidomide (plus dexamethasone) is currently available in the NHS for treating multiple myeloma later in the treatment pathway. The clinical experts explained that if people had lenalidomide maintenance treatment they would not then have lenalidomide again later in the treatment pathway. This is not included in the model.

## About this resource impact report

This resource impact report accompanies the NICE guidance on [lenalidomide maintenance treatment after an autologous stem cell transplant for newly diagnosed multiple myeloma](#) and should be read with it.

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