NICE National Institute for Health and Care Excellence

Putting NICE guidance into practice

Resource impact report:
Abemaciclib with an aromatase inhibitor for previously untreated, hormone receptor-positive, HER2-negative, locally advanced or metastatic breast cancer (TA563)

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Summary

NICE has recommended abemaciclib for locally advanced or metastatic, hormone receptor-positive, human epidermal growth factor receptor 2 (HER2)-negative breast cancer as first endocrine-based therapy in adults.

We estimate that:

- 8,200 people with locally advanced or metastatic, hormone receptor-positive, HER2-negative breast cancer are eligible for treatment with abemaciclib
- The market share of cyclin-dependent kinase (CDK) inhibitors (abemaciclib, palbociclib and ribociclib) with an aromatase inhibitor will be 60%, which is around 4,900 people
- 2,000 people will start treatment with abemaciclib each year from year 3 onwards once uptake has reached 40% as shown in table 1.

Table 1 Estimated number of people in England having abemaciclib

	2019/20	2020/21	2021/22	2022/23	2023/24
Population starting treatment with abemaciclib each year	740	1,200	2,000	2,000	2,000

This report is supported by a local resource impact template because the list price of abemaciclib has a discount that is commercial in confidence. The discounted price of abemaciclib 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 Abemaciclib

1.1 NICE has recommended abemaciclib with an aromatase inhibitor, within its marketing authorisation, as an option for treating locally advanced or metastatic, hormone receptor-positive, human epidermal growth factor receptor 2 (HER2)-negative breast cancer as first endocrine-based therapy in adults.

1.2 Current practice is for people with hormone receptor-positive, HER2-negative breast cancer to be treated with either ribociclib or palbociclib, with an aromatase inhibitor, as first endocrine-based therapy in adults.

1.3 Abemaciclib (a CDK inhibitor) with an aromatase inhibitor is an additional option alongside CDK inhibitors ribociclib and palbociclib and offers clinicians and patients an additional choice of treatment.

2 Resource impact of the guidance

2.1 We estimate that:

- 8,200 people with locally advanced or metastatic, hormone receptor-positive, HER2-negative breast cancer are eligible for treatment with abemaciclib
- The market share of CDK inhibitors (abemaciclib, palbociclib and ribociclib) with an aromatase inhibitor will be 60%, which is around 4,900 people
- 2,000 people will start treatment with abemaciclib from year 3 onwards once uptake has reached 40%.

2.2 The current treatment and future uptake figure assumptions are based on 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 abemaciclib by financial year.

Table 2 Estimated number of people having abemaciclib using NICE assumptions

	People starting treatment in year 1	People starting treatment in year 2	People starting treatment in year 3	People starting treatment in year 4	People starting treatment in year 5	Total number of people treated per year
2019/20	740					740
2020/21	740	1,200				1,940
2021/22	120[a]	1,200	2,000			3,320
2022/23		200[a]	2,000	2,000		4,200
2023/24			300[a]	2,000	2,000	4,300

[a]With an assumed treatment duration of 26 months, this gives 2 months treatment on average in year 3. To represent this the treatment numbers in year 3 have been adjusted e.g. 740 people treated for 2 months is equivalent to 120 people treated for a year.

2.3 This report is supported by a local resource impact template. The company has a commercial arrangement (simple discount patient access scheme). This makes abemaciclib available to the NHS with a discount. The size of the discount is commercial in confidence. The discounted price of abemaciclib can be put into the template and other variables may be amended. For enquiries about the commercial arrangement contact UKPricing@lilly.com.

Savings and benefits

2.4 Abemaciclib represents an additional treatment option as a first endocrine-based therapy for people with locally advanced or metastatic, hormone receptor-positive, HER2-negative breast cancer.

3 Implications for commissioners

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

3.2 Abemaciclib falls within the programme budgeting category 02E cancers and tumours, breast.

4 How we estimated the resource impact

The population

4.1 Around 46,000 women are diagnosed with breast cancer each year, of these around 41,000 will have invasive disease. Of these around 9,600 will progress to advanced disease and around 3,300 will have advanced disease on diagnosis.

4.2 Of the 12,900 women with advanced disease, around 8,200 will have hormone receptor-positive HER2-negative disease and be eligible for treatment with a CDK inhibitor with an aromatase inhibitor.

4.3 CDK inhibitors have a market share of around 60% which is about 4,900 women per year eligible to start treatment with abemaciclib.

4.4 Mean time on treatment for abemaciclib is 26 months so some women who started treatment in prior years will continue to be treated each year.

4.5 The population is broken down in greater detail in table 3, below.

Table 3 Number of people eligible for treatment in England

	Population	Proportion of previous row (%)	Number of people
	Total population		55,619,430
	Adult female population		22,352,862
	Incidence of breast cancer[1]	0.2	46,000
a	Proportion with invasive disease[2]	90	41,000
b	Proportion of women with early and locally advanced disease[2]	95	39,000
c	Proportion of women who survive until disease progression[2]	70	27,000
d	Proportion of women who progress to advanced disease[2]	35	9,600
e	Proportion of women who have advanced disease on diagnosis[3]	8 (of a)	3,300
f	Total women with advanced disease	d+e	12,900
g	Women with hormone receptor-positive HER2-negative disease who are eligible for treatment with CDK inhibitor[2]	64	8,200
h	Market share of CDK inhibitor therapies[2]	60	4,900
i	Number of people estimated to start treatment with abemaciclib each year from year 3[4]	40	2,000
	[1] Source: Cancer registration statistics 2016: Final [2] Source: Company submission [3] Source: Cancer Research UK, Breast cancer (invasive) statistics [4] Source: NICE assumption		

Assumptions

4.6 The resource impact template assumes that:

- The average treatment durations for CDK inhibitors as a class of drugs is assumed to be 26 months. This can be amended in the 'unit costs' sheet of the template.
- All people treated with abemaciclib, palbociclib or ribociclib are treated for the average duration with no dose modifications.

Other factors

4.7 All of the CDK inhibitor drugs have dose modification options, but only ribociclib is cheaper when the dose is reduced.

4.8 Abemaciclib is a continuous treatment with 28 days out of 28 on treatment, while palbociclib and ribociclib are 21 days on 7 days off treatment in each 28 day cycle. Some people may prefer treatment breaks while others may prefer the simplicity of taking their treatment every day.

4.9 All of the CDK inhibitor drugs have different adverse event profiles and clinicians and patients will need to take this into account when selecting a treatment.

4.10 All 3 drugs are orally administered and come in tablet form.

About this resource impact report

This resource impact report accompanies the NICE guidance on Abemaciclib with an aromatase inhibitor for previously untreated, hormone receptor-positive, HER2-negative, locally advanced or metastatic breast cancer and should be read with it.

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