

IQWiG Reports – Commission No. A15-18

**Safinamide –
Benefit assessment according to
§35a Social Code Book V¹**

Extract

¹ Translation of Sections 2.1 to 2.6 of the dossier assessment *Safinamid – Nutzenbewertung gemäß § 35a SGB V* (Version 1.0; Status: 13 August 2015). Please note: This translation is provided as a service by IQWiG to English-language readers. However, solely the German original text is absolutely authoritative and legally binding.

Publishing details

Publisher:

Institute for Quality and Efficiency in Health Care

Topic:

Safinamide – Benefit assessment according to §35a Social Code Book V

Commissioning agency:

Federal Joint Committee

Commission awarded on:

15 May 2015

Internal Commission No.:

A15-18

Address of publisher:

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IQWiG thanks the medical and scientific advisor for his contribution to the dossier assessment. However, the advisor was not involved in the actual preparation of the dossier assessment. The responsibility for the contents of the dossier assessment lies solely with IQWiG.

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Keywords: safinamide, Parkinson disease, benefit assessment

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List of abbreviations

Abbreviation	Meaning
ACT	appropriate comparator therapy
COMT inhibitor	catechol-O-methyltransferase inhibitor
G-BA	Gemeinsamer Bundesausschuss (Federal Joint Committee)
IQWiG	Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen (Institute for Quality and Efficiency in Health Care)
MAO-B inhibitor	monoamine oxidase B inhibitor
RCT	randomized controlled trial
SAE	serious adverse event
SGB	Sozialgesetzbuch (Social Code Book)
SPC	Summary of Product Characteristics
UPDRS	Unified Parkinson's Disease Rating Scale

2 Benefit assessment

2.1 Executive summary of the benefit assessment

Background

In accordance with §35a Social Code Book (SGB) V, the Federal Joint Committee (G-BA) commissioned the Institute for Quality and Efficiency in Health Care (IQWiG) to assess the benefit of the drug safinamide. The assessment was based on a dossier compiled by the pharmaceutical company (hereinafter referred to as “the company”). The dossier was sent to IQWiG on 15 May 2015.

Research question

The aim of this report was to assess the added benefit of safinamide in comparison with the appropriate comparator therapy (ACT) in adult patients with idiopathic Parkinson disease as add-on therapy to a stable dose of levodopa (alone or in combination with other Parkinson disease medicinal products) in mid-to late-stage fluctuating patients.

The G-BA specified the following ACT for the present therapeutic indication:

Add-on therapy with

- a non-ergot dopamine agonist
or
- a catechol-O-methyltransferase inhibitor (COMT inhibitor)
or
- a monoamine oxidase B inhibitor (MAO-B inhibitor)

It is assumed that levodopa is given in combination with a decarboxylase inhibitor. If using all treatment options does not provide sufficient symptom control, deep brain stimulation is to be considered.

The company followed the specification of the G-BA and, from the options mentioned, chose the COMT inhibitor entacapone as comparator therapy.

The assessment was conducted based on patient-relevant outcomes and on the data provided by the company in the dossier. Randomized controlled trials (RCTs) with a minimum duration of 24 weeks were to be included in the assessment.

Results

Direct comparison

There were no studies of direct comparisons of safinamide versus the comparator therapy entacapone.

Indirect comparison

The company conducted an indirect comparison according to Bucher of safinamide versus entacapone with placebo as common comparator. It included a total of 6 studies for this comparison: 2 studies on the safinamide side (016 and SETTLE), and 4 studies on the entacapone side (CSG, NSG, PSG and UK-IESG). All studies included by the company lasted 24 weeks. In addition to its study 016, the company identified the extension study 018 (total duration of 016/018: 2 years) on the safinamide side. However, it did not include this study in its indirect comparison because it had identified no entacapone studies with the same study duration. The safinamide and entacapone studies identified by the company principally concur with the research question.

Study pool for the indirect comparison on the entacapone side incomplete

One additional relevant study (BIA-91067-301) was identified on the entacapone side from the check of the completeness of the study pool. With a study duration of one year, the study met the inclusion criterion of a minimum study duration of 24 weeks for the present assessment. This deviates from the company's approach, however, which initially specified no minimum study duration for the search of studies of direct comparisons. For the indirect comparison, in contrast, it specified a study duration of exactly 24 and 102 weeks in its search for studies with entacapone because this corresponded to the duration of the safinamide studies identified by the company. Hence it did also not include the BIA-91067-301 study with a duration of one year in its indirect comparison. This approach is methodologically inadequate, however, because it may be meaningful to include studies of different duration in an indirect comparison. In addition, with analyses of the 018 extension study, the company could have made available study results with a similar study duration as in the BIA-91067-301 study also on the safinamide side.

Relevance of the BIA-91067-301 study for the indirect comparison

The inclusion of the BIA-91067-301 study is very important because it additionally addresses the following aspects of content:

- **Results for longer observation period:** In connection with the one-year BIA-91067-301 study, it would be possible to also use data from the extension phase of the 016/018 study, which the company did not consider in its indirect comparison. For this purpose, the company could have analysed data from its 016/018 study at similar time points of recording (48, 60 or 76 weeks) to conduct an indirect comparison with the one-year BIA-91067-301 study. Moreover, a check for homogeneity of the BIA-91067-301 study in a joint study pool with the 24-week entacapone study could have also been conducted.
- **Data on serious adverse events (SAEs):** Data on SAEs on the entacapone side were only available in the BIA-91067-301 study, but not in the remaining entacapone studies included by the company. Hence the inclusion would provide results on one further important outcome.
- **Temporal proximity to the safinamide studies:** The 4 entacapone studies included by the company, with publication dates between 1996 and 2003, are notably older than the

safranamide studies conducted between 2007 and 2012. It can be assumed that the treatment modalities of Parkinson disease have changed in the last 5 to 15 years. In this respect, the BIA-91067-301 study conducted between 2011 and 2013 may be more similar to the safranamide studies.

The non-consideration of the relevant study BIA-91067-301 and the associated non-consideration of the long-term data from the extension phase of the 016/018 study results in a major loss of information, which means that the analyses presented by the company do not contain all relevant data for the investigation of the added benefit of safranamide. Hence the indirect comparison presented by the company cannot be used for the assessment of the added benefit of safranamide in comparison with entacapone.

Extent and probability of added benefit, patient groups with therapeutically important added benefit⁴

On the basis of the results presented, the extent and probability of the added benefit of the drug safranamide compared with the ACT is assessed as follows:

Table 2 presents a summary of the extent and probability of the added benefit of safranamide.

Table 2: Safranamide – extent and probability of added benefit

Therapeutic indication	ACT^a	Extent and probability of added benefit
Treatment of adult patients with idiopathic Parkinson disease as add-on therapy to a stable dose of levodopa (alone or in combination with other Parkinson disease medicinal products) in mid-to late-stage fluctuating patients	Add-on therapy with: <ul style="list-style-type: none"> ▪ a non-ergot dopamine agonist or ▪ a COMT inhibitor^b or ▪ a MAO-B inhibitor 	Added benefit not proven
<p>a: Presentation of the respective ACT specified by the G-BA. In cases where the company, because of the G-BA's specification of the ACT, could choose a comparator therapy from several options, the respective choice of the company is printed in bold.</p> <p>b: The company chose the COMT inhibitor entacapone as comparator therapy.</p> <p>ACT: appropriate comparator therapy; COMT: catechol-O-methyltransferase inhibitor; G-BA: Federal Joint Committee; MAO-B: monoamine oxidase B</p>		

The G-BA decides on the added benefit.

⁴ On the basis of the scientific data analysed, IQWiG draws conclusions on the (added) benefit or harm of an intervention for each patient-relevant outcome. Depending on the number of studies analysed, the certainty of their results, and the direction and statistical significance of treatment effects, conclusions on the probability of (added) benefit or harm are graded into 4 categories: (1) "proof", (2) "indication", (3) "hint", or (4) none of the first 3 categories applies (i.e., no data available or conclusions 1 to 3 cannot be drawn from the available data). The extent of added benefit or harm is graded into 3 categories: (1) major, (2) considerable, (3) minor (in addition, 3 further categories may apply: non-quantifiable extent of added benefit, no added benefit, or less benefit). For further details see [1,2].

2.2 Research question

The aim of this report was to assess the added benefit of safinamide in comparison with the ACT in adult patients with idiopathic Parkinson disease as add-on therapy to a stable dose of levodopa (alone or in combination with other Parkinson disease medicinal products) in mid-to late-stage fluctuating patients.

The G-BA specified the following ACT for the present therapeutic indication:

Add-on therapy with

- a non-ergot dopamine agonist
or
- a COMT inhibitor
or
- a MAO-B inhibitor

It is assumed that levodopa is given in combination with a decarboxylase inhibitor. If using all treatment options does not provide sufficient symptom control, deep brain stimulation is to be considered.

The company followed the specification of the G-BA and, from the options mentioned, chose the COMT inhibitor entacapone as comparator therapy.

The assessment was conducted based on patient-relevant outcomes and on the data provided by the company in the dossier. RCTs with a minimum duration of 24 weeks were to be included in the assessment. This deviates from the company's inclusion criteria, which initially specified no minimum study duration for the search of studies of direct comparisons. For the indirect comparison, in contrast, it specified a study duration of exactly 24 and 102 weeks in its search for studies with entacapone because this corresponded to the duration of the safinamide studies identified by the company. This approach is methodologically inadequate (see Section 2.7.2.1 of the full dossier assessment).

2.3 Information retrieval and study pool

The study pool of the assessment was compiled on the basis of the following information:

Sources of the company in the dossier:

- study lists on safinamide (status: 1 May 2015)
- bibliographical literature search on safinamide (last search on 25 February 2015)
- search in trial registries for studies on safinamide (last search on 18 March 2015)
- bibliographical literature search on the ACT (last search on 2 March 2015)
- search in trial registries for studies on the ACT (last search on 17 February 2015)

To check the completeness of the study pool:

- search in trial registries for studies on safinamide (last search on 3 June 2015)
- bibliographical literature search on the ACT (last search on 8 June 2015)
- search in trial registries for studies on the ACT (last search on 8 June 2015)

Direct comparison

There were no direct comparative studies of safinamide versus entacapone. This concurs with the company's assessment.

Indirect comparison

The company conducted an adjusted indirect comparison according to Bucher [3] of safinamide versus entacapone with placebo as common comparator. The check of the completeness of the company's study pool for the indirect comparison produced one additional relevant study, the BIA-91067-301 study [4]. Due to the lack of this study in the indirect comparison, the study pool is not sufficiently informed, and the indirect comparison was not used for the assessment of the added benefit of safinamide.

Hereinafter, the study pool and its incompleteness with the resulting consequences are described first. Subsequently, the relevant studies, their similarity and aspects of content of the incomplete study pool are described in detail.

2.3.1 Study pool

The company included a total of 6 studies in its indirect comparison: 2 studies on the safinamide side (016 [5] and SETTLE [6], approval studies of the company), and 4 studies on the entacapone side (CSG [7], NSG [8], PSG [9] and UK-IESG [10]). All studies included by the company lasted 24 weeks. In addition to its study 016, the company identified the extension study 018 [11] (total duration of 016/018: 2 years) on the safinamide side. However, due to the study duration it did not include this study in its indirect comparison because it had identified no entacapone studies with the same study duration (102 weeks).

One additional relevant study (BIA-91067-301 [4]) was identified on the entacapone side from the check of the completeness of the study pool. This was a 5-arm RCT. 2 treatment arms of the study compared entacapone with placebo over a study duration of one year. Hence the study met the inclusion criterion of a minimum study duration of 24 weeks for the present assessment. The company did not include the study because, deviating from this, it only considered studies with the exact same study duration as its safinamide studies (24 weeks or 102 weeks). This approach is methodologically inadequate because it may be meaningful to include studies of different duration in an indirect comparison (see Section 2.7.2.1 of the full dossier assessment). In addition, with analyses of the 018 extension study, the company could have made available study results with a similar study duration as in the BIA-91067-301 study also on the safinamide side.

The following figure provides an overview of the complete data availability for the indirect comparison.

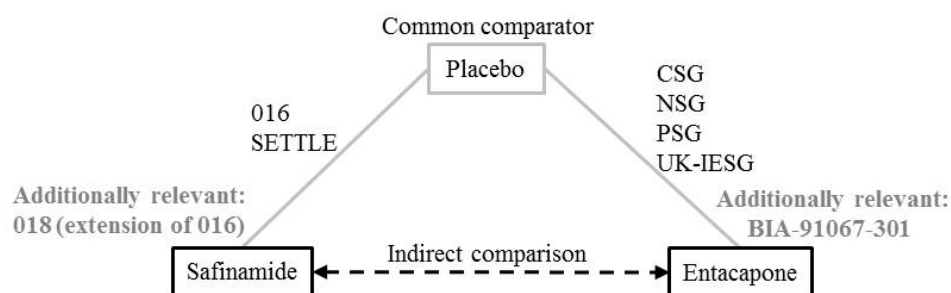


Figure 1: Data availability for the indirect comparison between safinamide and entacapone

The inclusion of the BIA-91067-301 study has the following advantages regarding content:

- In connection with the extension phase of the 016/018 study, data could be considered for a longer period of time (one year instead of 24 weeks).
- There would be additional data on SAEs. These are lacking in the remaining 4 entacapone studies.
- The BIA-91067-301 study was conducted in temporal proximity (2011 to 2013) to the included safinamide studies (2007 to 2012).

Due to the lack of the BIA-91067-301 study and the associated lack of the extension phase of the 016/018 study, the indirect comparison was not sufficiently informed and was therefore not used for the present assessment.

2.3.2 Study characteristics

Detailed information on the studies and interventions can be found in Table 8 and Table 9 in Appendix A of the full dossier assessment.

Safinamide studies

The studies 016/018 and SETTLE, which were included on the safinamide side, were randomized, placebo-controlled, double-blind approval studies sponsored by the company. Adult patients with idiopathic Parkinson disease with motor fluctuations who were already treated with a stable dose of levodopa were included. Daily “off” time was at least 1.5 hours. Patients in both studies were randomly assigned to treatment with safinamide or placebo. Interventions were conducted as add-on therapy to ongoing treatment with levodopa at a stable dose and possibly other Parkinson disease medication.

Both studies comprised a 4-week levodopa stabilization phase, a treatment phase of 24 weeks, and an optional tapering phase with stepwise reduction of the safinamide dose (from 50 mg to placebo and from 100 mg to 50 mg). After completion of the 24 weeks, patients in the 016 study could continue their treatment for another 78 weeks in the 018 extension study. This option was available to all patients in the 016 study; there was no unblinding when changing to the extension study. 81% of the patients made use of this option. There were no important differences between the study arms regarding the patients’ continuation.

Dosage

Two fixed safinamide dosages (50 mg and 100 mg) were compared with placebo in the 016/018 study. A total of 669 patients were randomly assigned in a ratio of 1:1:1 to the 3 treatment arms. The SETTLE study had 2 treatment arms (safinamide and placebo), to which a total of 549 patients were randomly assigned in a ratio of 1:1. In the safinamide arm, the starting dose was 50 mg, which after 2 weeks was to be increased to the maintenance dose of 100 mg. Dosing specifications in both studies did not completely correspond to the Summary of Product Characteristics (SPC). According to the SPC, treatment should be started at 50 mg daily. This daily dose may be increased to 100 mg/day on the basis of individual clinical need [12]. Hence neither the fixed doses in the 016/018 study nor the target dose of 100 mg daily in the SETTLE study completely corresponded to the recommendations of the SPC. The doses used in the studies are principally covered by the SPC, however. In addition, both studies offered the option to reduce the dose in the 100 mg arms if adverse events occurred. Consideration of the safinamide arms for the present assessment therefore appears to be adequate. The limitations concerning dosage affect the certainty of results, however. In case of significant differences in comparison with entacapone it would also be necessary to check whether these were independent from the safinamide dose used.

Entacapone studies

The studies included on the entacapone side (CSG, NSG, PSG and UK-IESG) were 4 randomized, placebo-controlled, double-blind studies conducted by other sponsors, in which patients with idiopathic Parkinson disease on a stable levodopa dose were included. Only patients with motor fluctuations were included in the studies NSG and PSG. Both patients with and patients without fluctuations could be included in the studies CSG and UK-IESG. Only patients with fluctuations were relevant for the present research question, however. In

both cases, motor fluctuations were defined by a minimum “off” time of 4.5 hours in 3 days and of 0.5 hours in one day. Separate analyses for the relevant subpopulation of fluctuating patients (57% of the total population) were available for the UK-IESG study. In the CSG study, the proportion of fluctuating patients was > 80% so that the analyses for the total population could also be used if required.

The treatment phases of the studies were 24 weeks (CSG and NSG), 6 months (UK-IESG), or 24 or 26 weeks with stepwise discontinuation of the study medication (PSG). In the studies NSG and PSG, entacapone treatment was preceded by a levodopa stabilization phase.

Each of the 4 studies included 2 treatment arms, in which either placebo or entacapone was administered in addition to a stable dose of levodopa (alone or in combination with other Parkinson drugs). Placebo or 200 mg entacapone was used in addition to each dose of levodopa. Depending on the study, the patients received 2 to 10 (CSG and UK-IESG) or 4 to 10 (NSG and PSG) units of levodopa daily.

171 and 205 patients were included in the studies NSG and PSG, randomization to the 2 treatment arms of the PSG study was conducted in a ratio of 1:1. 301 patients, 260 of whom had motor fluctuations, were included in the CSG study. The patients were randomly assigned in a ratio of 2:1 to the entacapone and the placebo arm. 172 of the 300 patients included in the UK-IESG study, who were also randomly assigned in a ratio of 2:1 to the entacapone and the placebo arm, had fluctuations.

Additional study BIA-91067-301

The relevant BIA-91067-301 study, which was additionally identified, was also a randomized, placebo- and active-controlled double-blind study, in which patients with idiopathic Parkinson disease and motor fluctuations on a stable dose of levodopa, if applicable together with other Parkinson drugs, were included. Excluding the “off” time before the first administration of levodopa in the morning, daily “off” time was at least 1.5 hours.

In the 5-arm study, 3 different dosages of the test drug opicapone (BIA 9-1067) were compared with entacapone and placebo as add-on therapy to ongoing treatment with levodopa for one year. A total of 600 patients were randomly assigned to the 5 treatment arms of the study. 243 patients were included in the study arms relevant for the present assessment (entacapone and placebo). As in the other entacapone studies, the individual dose of entacapone was 200 mg and was to be taken together with each dose of levodopa.

In contrast to the other studies, treatment duration was one year. This concurs with the inclusion criteria of the present assessment with a minimum study duration of 24 weeks.

Similarity of the studies

Studies included in an indirect comparison have to fulfil the assumption of similarity. This means that they should be comparable with regard to possible effect modifiers [13]. This

assumption cannot be investigated with statistical methods, but is checked by thoroughly investigating the studies included.

The patient characteristics of the respective studies can be found in Table 10 and Table 11 in Appendix A of the full dossier assessment.

All studies included patients with idiopathic Parkinson disease who had fluctuations under a stable dose of levodopa, and who, based on the available information on inclusion criteria and average disease duration, had had the disease already for several years.

The intervention was administered in addition to ongoing treatment with levodopa and, if applicable, other Parkinson drugs in all studies. In the safinamide studies, patients could be treated also with entacapone as concomitant medication. This was the case in 38% and 47% of the patients (study 016/018 and SETTLE). Entacapone was considered to be part of the basic therapy in these studies so that this had no consequences. There was no important difference regarding further allowed or prohibited previous and concomitant medication.

Due to the limited information in the publications of the entacapone studies, the similarity between the studies cannot be fully assessed for all criteria considered. Overall, based on the available information at patient level (age, sex, disease duration, disease severity, and study discontinuation) and at intervention level, there were no differences of a magnitude that would raise fundamental doubts about the comparability. The differences are described below.

Differences between the studies

Differences between the studies were shown in disease duration and in the proportion of men and women in the studies. Average disease duration of the patients was between 8.1 and 8.9 years in the safinamide studies 016/018 and SETTLE. In the entacapone studies NSG and PSG, average disease duration was already 10.8 to 11.0 years. This difference was not considered to be so serious as to raise fundamental doubts about the similarity of the studies.

In most studies (016/018, SETTLE, PSG and UK-IESG), the proportion of men in the patients included was somewhat larger (61% to 71%) than the proportion of women. Only in the CSG study was the proportion of women larger (57%). In case of heterogeneity of the results, this should be considered using sensitivity analyses.

There was an important difference between the safinamide and the entacapone studies regarding the time point of the conduct of the studies. The safinamide studies were conducted between 2007 and 2012, whereas the entacapone studies are already notably older. There is no detailed information on the corresponding periods of time for all studies, but the publications are from the years 1996 to 2003.

Additional relevant entacapone study BIA-91067-301

Based on the available information, the BIA-91067-301 study is also generally comparable to the available studies in its patient characteristics and inclusion and exclusion criteria. As in

the other studies, patients with idiopathic Parkinson disease with fluctuations on a stable dose of levodopa who had had the disease for at least 3 months were included.

There was no information on average disease duration and on the age of the patients for the BIA-91067-301 study, but the complete inclusion and exclusion criteria of the study were available. Minimum disease duration of 3 years was shorter than in the 016/018 study (5 years), for example, but comparable to the SETTLE study (also 3 years). In the BIA-91067-301 study, approximately 2 thirds of the patients were younger than 70 years (69% in the entacapone arm, and 66% in the placebo arm). Patients were therefore somewhat older than in the 016/018, for example, where about 2 thirds of the patients were younger than 65 years (68%, 65% and 67% in the placebo, 50 mg, and 100 mg safinamide arm). Average disease severity at baseline – recorded with subscore I to III of the Unified Parkinson's Disease Rating Scale (UPDRS) – was comparable to the other entacapone and safinamide studies. The allowed number of daily levodopa doses (3 to 8 doses) at baseline was somewhat lower in the BIA-91067-301 study than in the remaining studies, which included up to 10 daily doses.

Overall, the BIA-91067-301 study was considered to be sufficiently similar to the studies identified by the company. The deviating study duration of one year in comparison with 24 weeks and 2 years of the 018 extension study, which was also not included by the company, did not lead to the study results not being evaluable, but instead allows the consideration of longer observation periods. This is explained below.

Relevance of the BIA-91067-301 study for the indirect comparison

The inclusion of the BIA-91067-301 study is very important because it additionally addresses the following aspects of content:

- **Results for longer observation period:** In connection with the one-year BIA-91067-301 study, it would be possible to also use data from the extension phase of the 016/018 study, which the company did not consider in its indirect comparison. For this purpose, the company could have analysed data from its 016/018 study at similar time points of recording (48, 60 or 76 weeks) to conduct an indirect comparison with the one-year BIA-91067-301 study. Moreover, a check for homogeneity of the BIA-91067-301 study in a joint study pool with the 24-week entacapone study could have also been conducted.
- **Data on SAEs:** Data on SAEs on the entacapone side were only available in the BIA-91067-301 study, but not in the remaining entacapone studies included by the company. Hence the inclusion would provide results on one further important outcome (see Table 3).
- **Temporal proximity to the safinamide studies:** The 4 entacapone studies included by the company, with publication dates between 1996 and 2003, are notably older than the safinamide studies conducted between 2007 and 2012 (see Table 8 in Appendix A of the full dossier assessment). It can be assumed that the treatment modalities of Parkinson

disease have changed in the last 5 to 15 years. In this respect, the BIA-91067-301 study conducted between 2011 and 2013 may be more similar to the safinamide studies.

Table 3: Overview of the available outcomes – RCT, indirect comparison: safinamide vs. entacapone

Study	Outcomes										
	All-cause mortality	Change in “on” time	Change in “off” time	UPDRS Part I ^a	UPDRS Part II ^b	UPDRS Part III ^c	UPDRS Part I to III	Health-related quality of life	SAEs	discontinuation due to AEs	Specific AEs
Studies with safinamide											
016/018	•	•	•	•	•	•	•	•	•	•	•
SETTLE	•	•	•		•	•		•	•	•	•
Studies with entacapone											
CSG	•	•	•		•	•				•	•
NSG		•	•	•	•	•	•			•	•
PSG				•	•	•	•			•	•
UK-IESG	•	•	•	•	•	•	•			•	•
Additional relevant study with entacapone											
BIA-91067-301			•				•		•		•
a: Cognitive function, behaviour and mood. b: Activities of daily living. c: Motor function. AE: adverse event; RCT: randomized controlled trial; SAE: serious adverse event; UPDRS: Unified Parkinson’s Disease Rating Scale; vs.: versus											

Summary

The studies included by the company and the BIA-91067-301 study additionally identified principally concur with the research question of the assessment and were considered to be largely similar.

The non-consideration of the relevant study BIA-91067-301 and the associated non-consideration of the long-term data from the extension phase of the 016/018 study results in a major loss of information, however, which means that the analyses presented by the company do not contain all relevant data for the investigation of the added benefit of safinamide. Hence the indirect comparison presented by the company cannot be used for the assessment of the added benefit of safinamide in comparison with entacapone.

2.4 Results on added benefit

No suitable data were available for assessing the added benefit of safinamide, neither for a direct comparison nor for an indirect comparison. Hence the added benefit of safinamide versus the ACT is not proven.

This deviates from the company's assessment, which derived an added benefit based on the indirect comparison presented.

2.5 Extent and probability of added benefit

The result of the assessment of the added benefit of safinamide in comparison with the ACT is shown in Table 4.

Table 4: Safinamide – extent and probability of added benefit

Therapeutic indication	ACT ^a	Extent and probability of added benefit
Treatment of adult patients with idiopathic Parkinson disease as add-on therapy to a stable dose of levodopa (alone or in combination with other Parkinson disease medicinal products) in mid-to late-stage fluctuating patients	Add-on therapy with: <ul style="list-style-type: none"> ▪ a non-ergot dopamine agonist or ▪ a COMT inhibitor^b or ▪ a MAO-B inhibitor 	Added benefit not proven
<p>a: Presentation of the respective ACT specified by the G-BA. In cases where the company, because of the G-BA's specification of the ACT, could choose a comparator therapy from several options, the respective choice of the company is printed in bold.</p> <p>b: The company chose the COMT inhibitor entacapone as comparator therapy.</p> <p>ACT: appropriate comparator therapy; COMT: catechol-O-methyltransferase inhibitor; G-BA: Federal Joint Committee; MAO-B: monoamine oxidase B</p>		

This assessment deviates from the company's approach, which derived an indication of considerable added benefit of safinamide in comparison with entacapone.

The G-BA decides on the added benefit.

2.6 List of included studies

Not applicable as no studies were included in the benefit assessment.

References for English extract

Please see full dossier assessment for full reference list.

1. Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen. Allgemeine Methoden: Version 4.2. Köln: IQWiG; 2015. URL: https://www.iqwig.de/download/IQWiG_Methoden_Version_4-2.pdf.
2. Skipka G, Wieseler B, Kaiser T, Thomas S, Bender R, Windeler J et al. Methodological approach to determine minor, considerable, and major treatment effects in the early benefit assessment of new drugs. *Biom J* 2 July 2015 [Epub ahead of print].
3. Bucher HC, Guyatt GH, Griffith LE, Walter SD. The results of direct and indirect treatment comparisons in meta-analysis of randomized controlled trials. *J Clin Epidemiol* 1997; 50(6): 683-691.
4. Bial - Portela C. Efficacy and safety of BIA 9-1067 in idiopathic Parkinson's disease patients with "wearing-off" phenomenon: study results [online]. In: *ClinicalTrials.gov* 6 January 2015 [accessed: 22 June 2015]. URL: <https://clinicaltrials.gov/ct2/show/results/NCT01568073>.
5. Borgohain R, Szasz J, Stanzione P, Meshram C, Bhatt M, Chirilineau D et al. Randomized trial of safinamide add-on to levodopa in Parkinson's disease with motor fluctuations. *Mov Disord* 2014; 29(2): 229-237.
6. Newron. Safinamide in idiopathic Parkinson's disease (IPD) with motor fluctuations, as add-on to levodopa: full text view [online]. In: *ClinicalTrials.gov*. 27 March 2013 [accessed: 11 June 2015]. URL: <http://ClinicalTrials.gov/show/NCT00627640>.
7. Poewe WH, Deuschl G, Gordin A, Kultalahti ER, Leinonen M. Efficacy and safety of entacapone in Parkinson's disease patients with suboptimal levodopa response: a 6-month randomized placebo-controlled double-blind study in Germany and Austria (Celomen study). *Acta Neurol Scand* 2002; 105(4): 245-255.
8. Rinne UK, Larsen JP, Siden A, Worm-Petersen J. Entacapone enhances the response to levodopa in parkinsonian patients with motor fluctuations. *Neurology* 1998; 51(5): 1309-1314.
9. Parkinson Study Group. Entacapone improves motor fluctuations in levodopa-treated Parkinson's disease patients. *Ann Neurol* 1997; 42(5): 747-755.
10. Brooks DJ, Sagar H. Entacapone is beneficial in both fluctuating and non-fluctuating patients with Parkinson's disease: a randomised, placebo controlled, double blind, six month study. *J Neurol Neurosurg Psychiatry* 2003; 74(8): 1071-1079.
11. Borgohain R, Szasz J, Stanzione P, Meshram C, Bhatt MH, Chirilineau D et al. Two-year, randomized, controlled study of safinamide as add-on to levodopa in mid to late Parkinson's disease. *Mov Disord* 2014; 29(10): 1273-1280.

12. Zambon. Xadago 100 mg: Fachinformation [online]. February 2015 [accessed: 2 June 2015]. URL: <http://www.fachinfo.de>.

13. Bender R, Schwenke C, Schmoor C, Hauschke D. Stellenwert von Ergebnissen aus indirekten Vergleichen: gemeinsame Stellungnahme von IQWiG, GMDS und IBS-DR [online]. 2 February 2012 [accessed: 23 July 2015]. URL: http://www.gmds.de/pdf/publikationen/stellungnahmen/120202_IQWIG_GMDS_IBS_DR.pdf.

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