#### ORIGINAL ARTICLE



# "Biosimilar, so it looks alike, but what does it mean?" A qualitative study of Danish patients' perceptions of biosimilars

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### Abstract

Biosimilars are highly similar follow-on products for biologics that can foster biologics competition. Questionnaire studies have attempted to gauge the patient perspective on biosimilars, but none have delved deeper into how patients view biologics and switching of these. Considering Denmark has one of the highest biosimilar uptakes worldwide, the aim of this study was to investigate how Danish patients with psoriasis, arthritic diseases or inflammatory bowel disease perceive biosimilars. Twelve participants were semi-structurally interviewed in either a focus group or an internet-based, individual interview between May 2019 and July 2019. Content analysis was inductively applied. Participants on originators voiced more reluctance towards using biosimilars than those already using them. Both participants using originator and biosimilar products expressed concerns about reoccurrence of disease symptoms due to differences in effectiveness and safety. Participants generally struggled with understanding biosimilarity, and they voiced a need to be well-informed about switching. They were all aware of and accepted how healthcare budget restrictions played a role in the push to use biosimilars. To improve biosimilar uptake and willingness to switch to a biosimilar, patient-centred information on efficacy and safety and explanation of the societal benefits of the savings from using biosimilars must be carefully communicated.

#### KEYWORDS

biologics, biosimilar, patient, perspective, switching

# | INTRODUCTION AND **BACKGROUND**

Biologics are treatment options indicated for autoimmune diseases such as psoriasis, arthritic diseases and inflammatory bowel disease (IBD), but patient access has been restricted due to high cost. Biologics contain active substances that originate from living cells or organisms in contrast to chemically synthesised small-molecule drugs. Consequently, the active substances of biologics

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are usually larger and more complex molecules.<sup>2</sup> These are mostly developed with biotechnology using cell systems and DNA technology that entail a more complex manufacturing process than non-biological medicines.<sup>3</sup> Therefore, the biologic follow-on products termed biosimilars are regulated differently than small-molecule generics. Biosimilars must be highly similar to the reference product and, naturally, still fulfil the regulatory standards of quality, safety and efficacy to be authorised for marketing.<sup>4,5</sup> When regulatory exclusivities and patents for biologics expire, biosimilars can enter the market with potential to introduce price competition and increase patient access.<sup>6,7</sup> The first biosimilar was approved in the EU in 2006.<sup>5</sup>

Recent survey studies have shown that challenges for patient acceptance of biosimilars are patients' concerns of quality, efficacy and safety compared with the reference product.8-10 It was also found that many patients are reluctant to accept biosimilars and that patients on biosimilars without originator experience were more accepting of biosimilar treatment compared with patients on originator treatment without biosimilar experience. 9,11,12 In addition, 24% of patients discontinue infliximab biosimilar use due to patient perceived features of the medicines. 13 However, there is a lack of qualitative studies on how patients perceive biosimilars and what meaning patients ascribe to their biologics treatment and a possible switch between biologics. Therefore, the aim of this study was to investigate how Danish patients with psoriasis, arthritic diseases or IBD experience perceive biosimilars.

#### 2 | MATERIALS AND METHODS

A qualitative approach was applied using focus groups and subsequently internet-based individual interviews.<sup>14</sup> The consolidated criteria for reporting qualitative research (COREQ) checklist<sup>15</sup> guided the planning and conduct of this study.

# 2.1 | Recruitment of participants

The participants were purposefully recruited using the eligibility criteria: biologic or biosimilar user, above 18 years of age with psoriasis, arthritic diseases, or IBD and being a resident of Denmark. The participants were recruited through two patient organisations (Psoriasisforeningen and Colitis-Crohns Foreningen), through patient-related groups on Facebook and via networking. An even distribution of disease area, age and gender was aimed for when recruiting the participants.

# 2.2 | Focus groups

The focus group interviews were semi-structured.14 MV, ABA and LCD designed the interview guide with the predefined topics: diagnosed disease, medicines in general, biologic originators and biosimilars. The topics were inspired by the results of Jacobs et al.9 and Aladul et el.<sup>11</sup> The focus groups were conducted in a meeting room at the University of Copenhagen. Each focus group had both a moderator (MV) and a facilitator (LCD or ABA). The focus groups were audiorecorded, and notes were taken during the interviews by the facilitator. Prior to the focus group interviews, each participant filled in a form with descriptive information. This information consisted of gender, age, diagnosis and information their biologic treatment(s).

# 2.3 | Internet-based, individual interviews

To accommodate the challenges presented by the geographical distance between the researchers and the participants, internet-based, individual interviews were also conducted with eligible participants who were unable to participate in a focus group. Further, the internet-based interviews allowed the participants to choose the interview environment. The interview guide for the internet-based, individual interviews was based on the interview guide used at the focus groups. Prior to the individual interviews, the participants provided the same descriptive information as the focus group participants. Combined audio and video interviewing were used to enable nonverbal communication, but the interviews were only audio-recorded.

### 2.4 | Data analysis

The audio-recordings were transcribed verbatim and content analysis inductively applied. <sup>16</sup> The data from individual and focus group interviews were pooled to obtain a richer understanding of the participants' lived worlds. <sup>17</sup> All authors independently analysed the data, where the authors repeatedly read the transcripts to analyse and understand the participants' perceptions and lived worlds. From relevant quotes, themes were iteratively identified by each of the analysts. No differences were seen between the themes identified in the individual interview versus focus group data. The analysis was finalised by author discussions and reach of consensus that all themes relevant to the research question had been

identified and that the analysis reflected the data as a whole. MV translated the quotes from Danish to English.

#### 2.5 | Ethics

All participants provided written informed consent prior to participation. No ethics approval was required according to Danish law<sup>18</sup>; however, ethical considerations were met. All interviewees are anonymous, and all materials are stored confidentially. All data collection and processing were carried out in compliance with European General Data Protection regulation (GDPR).<sup>19</sup>

### 3 | RESULTS

The data comprised two focus groups each with three participants held in May 2019 and six internet-based, individual interviews held in June 2019 and July 2019, resulting in a total of 12 participants. Table 1 provides an

overview of the 12 participants' age, gender, disease area and whether they participated in an individual interview or focus group. The participants included ten women and two men, aged from 25 to 75 years (median: 43 years). The duration of the focus groups was 1 h and 4 min and 1 h and 27 min, respectively, and the six internet-based, individual interviews ranged from 17 min to 33 min (mean: 27 min). The participants were at the time of interview receiving one of following originators Cosentyx<sup>®</sup> (secukinumab), Cimzia<sup>®</sup> (certolizumab pegol), RoActemra® (tocilizumab), Remicade® (infliximab) and Simponi® (golimumab) or one of following biosimilars Hyrimoz<sup>TM</sup> (adalimumab), Benepali<sup>®</sup> (etanercept) and Inflectra® (infliximab). The participants using biosimilars had on average been treated with biologics for 8 years compared with 5 years for the participants using originators.

Three overarching themes emerged from the inductive analysis: (1) influence of disease on patients' lives, (2) patients' perceptions of biologic treatment and (3) importance of the patient feeling informed. All themes with subthemes are presented in Table 2.

TABLE 1 Overview of participants and self-reported information

Participant	Interview type	Gender (male/ female) and age (years)	Diagnosis	Time of diagnosis	Start of biologic treatment	Type of biologic treatment	Number of switch (es)
P1	Focus group	Male, 37	Morbus bechterew	Oct 2003	Jan 2013	Biosimilar	1
P2	Focus group 1	Female, 58	Rheumatoid arthritis	Jan 2013	Nov 2018	Biosimilar	1
Р3	Focus group	Female, 75	Psoriasis	Aug 1964	Feb 2005	Biosimilar	3
P4	Focus group 2	Female, 25	Rheumatoid arthritis	Aug 2012	Aug 2016	Originator	0
P5	Focus group 2	Female, 35	Psoriasis	1998	Mar 2007	Biosimilar	1
P6	Focus group 2	Female, 38	Crohn's disease <sup>a</sup>	2001	2003	Biosimilar	2
P7	Individual interview	Male, 48	Chron's disease <sup>a</sup>	May 2001	Sep 2001	Originator	4
P8	Individual interview	Female, 37	Ulcerative colitis <sup>a</sup>	Mar 2015	Nov 2017	Biosimilar	1
P9	Individual interview	Female, 30	Ulcerative colitis <sup>a</sup>	Oct 2015	Aug 2017	Originator	0
P10	Individual interview	Female, 47	Psoriasis	2004	Nov 2017	Originator	0
P11	Individual interview	Female, 30	Psoriasis	Apr 2011	Jun 2011	Biosimilar	5
P12	Individual interview	Female, 30	Rheumatoid arthritis	Dec 2013	May 2018	Originator	0

<sup>&</sup>lt;sup>a</sup>This diagnosis is a type of inflammatory bowel disease.



# TABLE 2 Themes and subthemes from the focus groups and individual internet-based interviews

1. Influence of disease on 1.1) Severity of disease patients' lives 1.2) Influence of disease on physical and mental state 1.3) Influence on work life/ studies and life choices 2. Patients' perceptions of 2.1) Access to biologic treatment biologic treatment 2.2) Need to be taken seriously 2.3) Impact of medication on life 2.4) Understanding the complexity of biologics 2.5) Perceptions of switching from originator products to biosimilars 2.6) Safety net for switches 2.7) Side effects 2.8) Cost burden on society and solidarity 3. Importance of the 3.1) Differing and inadequate patient feeling information informed 3.2) Information provision when

# 3.1 | Influence of disease on patients' lives

switching to biosimilars

### 3.1.1 | Severity of disease

All participants described that they had experienced their disease in a severe state. Some participants explained how they had had a progression of their disease symptoms in a short space of time or throughout a course of years.

I went from being relatively healthy to sit in a wheelchair in 14 days. P11 (individual interview)

... But then one evening it turned out to be serious and I was acutely admitted to the hospital and was actually operated on immediately. A large part of my intestine was removed because it was damaged inside. P6 (individual interview)

I started seeing changes in my skin when I was in eighth grade and then I had ... changes in my nails, when I started university. When I was 21 or 22 years old ... Then I began to have something [symptoms] with the joints. Because psoriasis and arthritis go together ... P5 (focus group)

They also expressed how being diagnosed with psoriasis, arthritic disease or IBD can be very severe and the participants explained how it felt being diagnosed with a chronic illness. They highlighted their tiredness and the feeling of constant uncertainty of not being able to predict whether the disease would stay in remission or whether a flare-up was on its way. All expressed a clear link between being chronically ill and having a need for medicinal treatment; for example, one participant felt that medication use was related to being chronically ill and that it could not be avoided.

# 3.1.2 | Influence of disease on physical and mental state

The participants told about being physically limited and mentally influenced in their daily life as a consequence of their disease. For example, 'simple' everyday tasks had become physically too demanding and that had a diminishing effect on their mental state.

- P2: Then there is the psychological side of it that surface because you can't do what you are used to doing. And I lost my job because of it....
- P3: Well one gets mental. No matter what kind of arthritis it is, it's not good for one's mental health, because you can't do what you want to and feel like doing. And then you get so tired, so tired, P2 and P3 (focus group)

It is very different [the situation from before to now] when you ask how it affects my daily life, then there is a lot of mental factors in it. I always need to think about where I am going and what the surroundings are, for example is there a toilet nearby. Are there many people or many toilets, are they easily accessible. P9 (individual interview)

One participant addressed how happy she felt when she met people who saw her as a person and not as a patient. This feeling was shared among other participants that a feeling of being different from others had a great impact on their mental well-being.

# 3.1.3 | Influence on work life/education and life choices

Nearly all participants experienced that their disease influenced their work life or education and that they had to make life choices conditioned by their disease. One example was a participant who had to decide if becoming pregnant was an ideal situation, and they felt forced to compromise in life compared with others who were not chronically ill.

I am at work fewer hours, I work part time and I feel when symptoms flare up/ ... /then it's my whole life that gets affected. P8 (individual interview)

You just get worn out, until you no longer qualify for it [time-limited state scholarship]. And then I had to throw in the towel. I didn't know what else to do. I didn't want to give up on my education, but in the end I had to say 'Now it needs to stop. Because this won't work'. I also have rent [to pay] and then I went on sick leave. P6 (individual interview)

# 3.2 | Patients' perceptions of biologic treatment

## 3.2.1 | Access to biologic treatment

All participants said that they felt a need for more effective treatment prior to starting their biologic treatment. Lack of effect of their previous treatments had left them with uncontrolled symptoms, and in some cases, their diseases progressed to a severe state that needed urgent solutions. Such situations led them to be prescribed biologics. However, the participants talked about an often arduous journey where they had to try various treatments according to treatment guidelines, which were viewed as a step-wise process. The participants felt they had to climb 'one step of the staircase at a time' to access biologic medication at 'the top of the stairs'.

### 3.2.2 | Need to be taken seriously

Some participants explained how they needed to be taken seriously and how they had a need for being understood by the health care professionals (HCPs). One participant explained how she lacked a feeling of being included in the treatment decisions because she felt invisible once she was given a diagnosis.

At that time I was actually not included that much. To be honest I was assigned at a hospital ward where I felt I was addressed like I was a door/ ... /They absolutely didn't care

about what I said and meant and thought. They pulled some treatment over me and that was what happened. P11 (individual interview)

## 3.2.3 | Impact of medication on life

All the participants said that they were positive towards biologic treatment. They explained how the treatment had increased their quality of life and how they sometimes would feel that they were not ill. The participants expressed that their biologic treatment was lifesaving and life-changing and how these had high value to them.

So I didn't really have a choice. If I had said no thank you, then I would have been on my own. (P6 is laughing in agreement) And I said, yes please./.../It [biologic treatment] saved my life for sure. P5 and P6 (focus group)

The participants also spoke about their fear of being discontinued on their biologic treatment because the treatment was perceived as necessary for them to function in their daily life. Additionally, that discontinuation of their medication made them fear losing their functioning gained from their biologic treatment.

# 3.2.4 | Understanding the complexity of biologics

Nearly all participants found it difficult to understand biologic medication and in detail what it actually does to the body. Moreover, the majority of the participants on both originator and biosimilar referred to biosimilars as 'copy products' and expressed resemblance in type of product between biosimilars and generics. The participants, however, were seeking information on biologic medication on the internet and in social network forums.

... Today you can find a lot to read on the internet. The other day I read that someone wrote on Facebook that biologic medication is chemo and then I was like 'Is it?' No, I don't think it is, I mean it is a protein, that's not chemo so in that case I am a bit 'hmm' and then again you read stuff like that, right? And then you begin to doubt again. 'God, what is it, poison or what that I am putting in my body, right? P10 (individual interview)

# 3.2.5 | Perceptions of switching from originator products to biosimilars

The participants who received treatment with originators were more reluctant to switch to biosimilars compared with the participants who already were on biosimilars. One reason they explained was that the process towards getting biologic medication has been long for most of the participants. Therefore, when they finally received a treatment that keeps the symptoms in remission, the participants worried that switching could cause the symptoms to flare-up again or that they would experience more or other types of side effects.

Because now I am feeling so good with this [biologic treatment] I would not feel good with switching to something else that I wouldn't know was good because all along I have felt like a guinea pig because medication is tested on you and then you wait to see "Oh, does this work on you". So, I would actually not feel good about that/ ... /and then settle for something [a biosimilar] which only gives your life back half or something [i.e. has half the effect]. P12 (individual interview)

The participants who already had experienced switching to a biosimilar expressed more openness towards switching. One participant on biosimilar treatment expressed to be open to switching to a biosimilar because she believed it is the same, but at the same time, the participant said that if the package looked different, it would influence her beliefs negatively.

### 3.2.6 | Safety net for switches

Some of the participants on originators felt a need of having a safety net in case they would be switched to a biosimilar. They would be more willing to switch to a biosimilar beforehand; they were promised that they could return to originator treatment if they experienced the biosimilar to be less effective or give more side effects. Further, one participant who had experienced being switched from an originator to a biosimilar also said that he would have felt more comfortable with this switch if he had been told that he had an opportunity to switch back to the originator.

#### 3.2.7 | Side effects

All the participants mentioned side effects from biologics during the interviews. Some participants spoke of the side effects of biologic treatment compared with other medication they had tried for their disease and explained that these were limited. Also, that the limited number of side effects with biologic treatment was nothing compared with the effect they gained, and that this also was a part of their wariness with switching between products.

And luckily I have not experienced side effects from it [biologic treatment] so I also didn't feel like changing that [with another non-biologic medication]. P4 (individual interview)

Some participants spoke of side effects as something they tried to avoid thinking about because they felt that the thoughts alone could induce side effects. Thus, they expressed that they were more afraid of the potential of having side effects. This was also one of the main reasons that the participants were reluctant to switch products because they felt a need to be safe with biologic treatment. They indicated a need to be followed up by the HCPs once biosimilar treatment was initiated and until their condition was stable.

## 3.2.8 | Cost burden on society and solidarity

Some participants addressed how they felt as a burden on society by receiving expensive pharmaceutical treatment. They felt that the HCPs kept telling them that the treatments they received were of high cost.

- P1: I have been told many times that 'It is expensive what you get'.
- P3: Well that they will tell you for sure.
- P1: Yes, yes. (Everyone is laughing)
- P1: 'And what you received is the same just a little cheaper [biosimilar].' P1 and P3 (focus group)

The participants explained that they could understand the economic arguments for introducing biosimilars because of the Danish universal healthcare coverage for the entire population. This was generally a common understanding among the participants on biosimilars. Some participants on originator were in agreement, but the remaining participants on originator were

concerned that switching to a biosimilar only was done for economic purposes without ensuring the same efficacy and safety of the treatment.

# 3.3 | Importance of the patient feeling informed

## 3.3.1 | Differing and inadequate information

The information provided by HCPs to the participants regarding biologic treatment varied significantly according to their recollection, where some thought it quite adequate and others found the provided information lacking. The majority of the participants on biosimilars felt they were generally well-informed with regard to biologic treatment. However, two participants using biosimilars did not feel that they had received sufficient information about biologic treatment in general.

Well, I would say that the information has been very inadequate. I just arrived at the out-patient clinic and have not received any information about it [biologic treatment]. So, I am actually in doubt what it is, like what does this medication do/ ... /the only information I got was by researching myself. P8 (individual interview)

Well, first of all, I am assigned at [hospital where P10 is assigned] and there are some fantastic nurses there, who explained everything to me, and I have had the possibility to call and I even think they called me during the first period of time after I started the medication [biologics], just to hear how I was feeling. And the doctor/ ... /was also amazing and explained a lot about it [biologic medication]. P10 (individual interview)

Although the participants in general felt well-informed about biologic treatment, all participants expressed a lack of information about biosimilar treatment, which made the participants uncomfortable with switching from an originator to a biosimilar. The majority of the participants treated with originators had heard about biosimilars but did not have detailed information. The participants generally preferred that the information regarding biologic treatment was provided by the physician or the nurses who they already had contact with in the clinic. These professionals' educational background gave the participants comfort, and they felt that the HCPs at the hospital were specialised in biologic treatment.

# 3.3.2 | Information provision when switching to biosimilars

There was generally mutual agreement among the participants that a 'good' switch to a biosimilar included information that provides comfort and also that information regarding possible side effects was important.

... the same way as they included me in the process [of switching to a biosimilar]. They explained and explained to me why, because I am a person who wants to know why. They should not just say 'You must [switch to a biosimilar]'. No, you should tell me why because this is my body ... information is good during the process and the more you know the safer you feel about it. P10 (individual interview)

However, one participant expressed a low need for information, explaining that her thinking was different from the others in the focus group because of the difference in age between the participants (38 and 17 years age difference, respectively). Further, she was used to accepting what the physician suggested.

I can also see that my network with other young patients, typically the ones who have switched from an ordinary product to a biosimilar ... many who received good information about it, they were properly included in the process and says [the patients who were included] "it is the same but something else" and so on, they don't feel it is a big problem. But those who were not informed, who just show up and have to pick up their medication and notice that it looks different and so on, they feel a bit hoodwinked. P11 (individual interview)

### 4 | DISCUSSION

The participating patients reported that their biologic treatments had great impact on their daily lives. Generally, biologic treatment was positively perceived, and the participants said that they felt an increase in quality of life as a result of using biologic treatment. The participants expressed reluctance to switch from originator to biosimilar product because of the difficulty in understanding the complexity of biologics and biosimilarity, resulting in concerns about possible flare-ups and more or other side effects. The patients did overall not feel



included in their treatment decision making, and in addition, they appeared insufficiently informed about biologic switching.

This study adds an understanding of present and previously reported<sup>9,11,20,21</sup> patient hesitance to switch to a biosimilar. This understanding arises from the participating patients' descriptions of their disease contexts and that a switch was associated with a risk of a potential flare-up of disease. Their descriptions clearly showed that they were highly affected and influenced in their daily lives before biologic treatment and that the mere thought of receiving a different product than what they had experience with was associated with high uncertainty. Thus, the present results show that participants' concerns with switching are related to safety concerns or a fear of different or less effect of the biosimilar compared with the effect they have experienced from originator treatment as seen in previous studies.<sup>22–24</sup> A contributing factor to these concerns could be the participants' challenge in understanding the complexity of biologics, which is reflected in that almost all participants were unaware that biosimilars are different from generics. This contrasts Aladul et al. where patients were well-informed and showed high understanding of biosimilars<sup>11</sup>; however, low biosimilar awareness has been reported previously. 9,23-26 Those gaps in knowledge could explain the observed low willingness to switch to a biosimilar among our informants.

To resolve the limited patient understanding of biologic complexity and hesitancy to switch among those using originator products, a suggestion to increase patient education and information about biosimilars to foster acceptance and use of biosimilars is not new but still needed. The present results indicate that the majority of participants were satisfied with the information provided by HCPs regarding biosimilar treatment; it was still clear that HCPs had failed to communicate and educate them sufficiently on safety and efficacy. However, all participants were well-informed about the cost concerns relating to the treatment. This caused the participants to feel that they were a cost burden on society, while also understanding that the welfare system should allow others to be treated as well. To increase patients' feelings of solidarity and acceptance of biosimilars, the HCPs should rather explain the benefits of the savings regarding improvement of hospital facilities or staff rather than the financial savings of each patient as suggested by Barbier et al.<sup>27</sup> One suggestion could be to create patient-centred information as well as disseminating the findings of the Danish Medicines Agency that the safety profiles of biosimilars are not significantly different from the originators' safety profiles.<sup>28</sup> This information could help eradicate any misconceptions that

reduction in price equals lower quality<sup>9</sup> and improve patient acceptance of and confidence in biosimilars. Such communication to patients should be made by healthcare professionals as these are trusted information sources for patients.<sup>24,26,29</sup> However, it is also important to develop patient education material based on recommendations to ensure its effectiveness, such as developing tailored information, delivered in a relevant format and by competent HCPs.<sup>30–32</sup> Further research is needed to compare prescribers' and patients' perspective on available patient educational information to identify potential gaps and differences in understanding of the

The present results are noteworthy because they are from Denmark, which has a high biosimilar uptake<sup>33</sup> and a national taskforce,<sup>34</sup> which has worked extensively to support biosimilar acceptance and use among clinicians as well as supplying patient information material.<sup>35,36</sup> Further, because the participating patients' hesitancy to switch *cannot* be ascribed to cost, all of the biosimilars received by the participants were fully reimbursed contrary to other healthcare systems.<sup>27</sup> Therefore, these results are potentially more profound in other countries with patient co-payment and lower biosimilar uptake. Thus, we believe that the results are useful for other countries to target future educational material by better understanding the complex patient perspective on biosimilars.

A strength of the study is that the qualitative approach with focus groups and one-on-one interviews offered insight into the patients' experiences and lived worlds regarding their biologics treatments as well as their thoughts on biosimilars and a possible switch from originator to biosimilar product. In both focus groups, all participants contributed to the group dynamics by questioning, agreeing and disagreeing with each other and thus utilised the advantages of focus groups to obtain nuanced data. 37,38 A limitation of the study is that each focus group consisted of only three participants, which limits the range of experiences provided. However, the participants had shared abundantly on the topic, which lowers concerns about this limitation.<sup>39</sup> They interacted freely, sharing thoughts on the predefined topics and resulting constructive group dynamics, which all strengthen validity of the findings. The internet-based, individual interviews were relatively short but still went in depth to show a range of experiences and thoughts about the topic of biologics in general and specifically on biosimilarity. Both methods of interviewing pointed in the same direction in the content analysis, which confirmed that participants felt equally free to express themselves about the issues both as part of a group and when meeting the interviewer alone online. Another limitation

was that the participant recruitment through patient organisations and relevant patient groups on Facebook forums excludes the patients not active on these sites that can affect transferability of the results. 40 Transferability can also have been lowered, as a majority of participants were women. However, the diversity of the patients' age, type of disease and geographic location opens up to a variety of perceptions of the patients using biologics. Despite the relatively small sample size, no new or relevant themes emerged in connection with the research question during the final interviews, and thus data saturation may have been reached.41

#### 5 | CONCLUSION

This study presents a deeper understanding of the low willingness to switch to a biosimilar among patients. High uncertainties were related to switching to a biosimilar as a consequence of the increase in quality of life when being treated with biologic and gaps in knowledge indicated a need for information. Suggested solutions to improve the biosimilar uptake and willingness to switch to a biosimilar include patient-centred information on efficacy and safety and explanation of the societal benefits of the savings from using biosimilars. By increasing the patient education and information about biosimilars, it would improve the acceptance and confidence of patients and the possibility to realise the full potential of biosimilars.

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#### DATA AVAILABILITY STATEMENT

The authors have chosen not to share data because this would compromise anonymity and confidentiality of the participants.

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