Analysis of Cost per PASI75 and per DLQI 0/1 Responder over 52 Weeks in Patients with Moderate Plaque Psoriasis Initiated on Apremilast, Remaining on Apremilast or Switching to Biologics, and Patients Hypothetically Treated with Biologics AB Initio, Based on the Results of the Apraisal Multicenter Observational Study in Greece

POSB63

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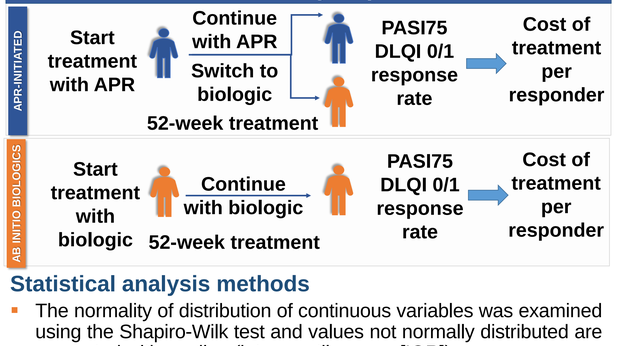
INTRODUCTION

- This analysis aimed to evaluate the 52-week treatment cost per patient achieving ≥75% reduction in Psoriasis Area and Severity Index [PASI75 cost-per-responder (CPR)] and per patient attaining Dermatology Life Quality Index (DLQI) 0/1 (DLQI-0/1CPR) in patients initiated and remaining on apremilast[1] (APR) or switching to biologics, and those hypothetically treated with biologics ab initio.

METHODS

- Data on APR treatment discontinuation, PASI75 and DLQI 0/1 response were derived from the Apremilast in Moderate Psoriasis in Real Life Clinical Practice (APRAISAL; NCT03059953) study in biologic-naïve patients with moderate plaque psoriasis in Greece.
- For biologic/biosimilar response rates, a stepwise search strategy was used based on published studies (≥52-week follow-up; real-world prospective/phase III; bio-naïve/low prior exposure to biologics; moderate/moderate-to-severe psoriasis).
- Biologics/biosimilars included: ustekinumab (UST), secukinumab (SEC), brodalumab (BROD), and adalimumab (ADA) originator; and ADA biosimilars 1-3 (ADAbs1-3). Ratios of biologics/biosimilars were based on local public market share data,[2] while corresponding costs were derived from the Price Bulletin published on 21 December 2020.
- The **'APR-initiated'** 52-week cost was the cost of APR for patients remaining on APR plus the cost of those switching to biologics, calculated by adding the APR cost for the actual time period during which they were treated with APR and the average weekly cost based on the ratio of biologics/biosimilars for the weeks they were receiving biologic agents.
- The **'ab initio biologics treatment approach'** cost was calculated based on the ratio of biologics/biosimilars and average annual costs of the respective biologics/biosimilars (**Figure 1**).

FIGURE 1. Schematic of analysis process



Statistical analysis methods

- The normality of distribution of continuous variables was examined using the Shapiro-Wilk test and values not normally distributed are presented with median (interquartile range [IQR]).

RESULTS

APRAISAL cohort baseline characteristics

- Demographics and disease characteristics of the APRAISAL cohort at APR initiation (baseline) are shown in **Table 1**.

TABLE 1. APRAISAL cohort baseline characteristics

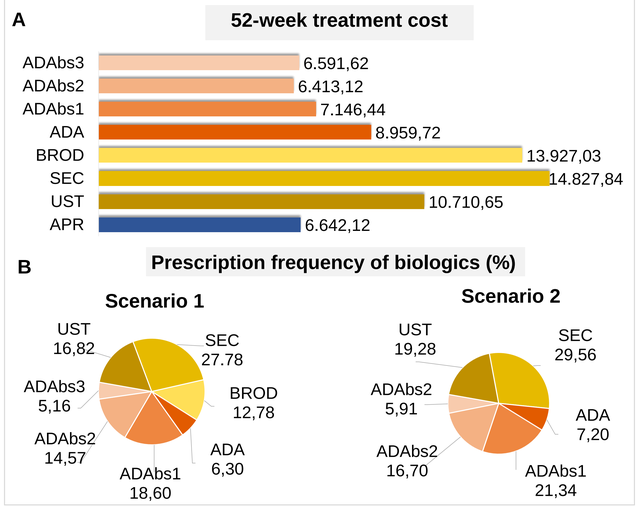
N=287	
Male, %	64.8
Age, median (IQR), years	52.4 (41.8-63.9)
Obese (BMI ≥30 kg/m^2)*, %	39.6
Ever smoker, %	73.5
At least one medical condition/comorbidity, %	55.4
Psoriasis duration, median (IQR), years	9.8 (3.2-18.2)
Prior systemic therapy for psoriasis, %	69.3
PASI score at baseline, median (IQR)	11.8 (10.8-14.7)
DLQI score at baseline, median (IQR)	12.0 (11.0-15.0)

*Data for 2 patients were missing; BMI, Body Mass Index; DLQI: Dermatology Life Quality Index; IQR, interquartile range, PASI, Psoriasis Area Severity Index

52-week treatment cost and prescription frequencies

- 52-week treatment cost for each agent based on suggested dosing regimen per the local label and wholesale purchase prices are shown in **Figure 2A**.
- Prescription frequencies used for each biologic for calculation of cost per PASI75 (scenario 1) and DLQI 0/1 (scenario 2) responder are shown in **Figure 2B**.
- For scenario-2, BROD was excluded due to lack of relevant published DLQI-0/1 response data

FIGURE 2. Annual cost and prescription frequency per agent



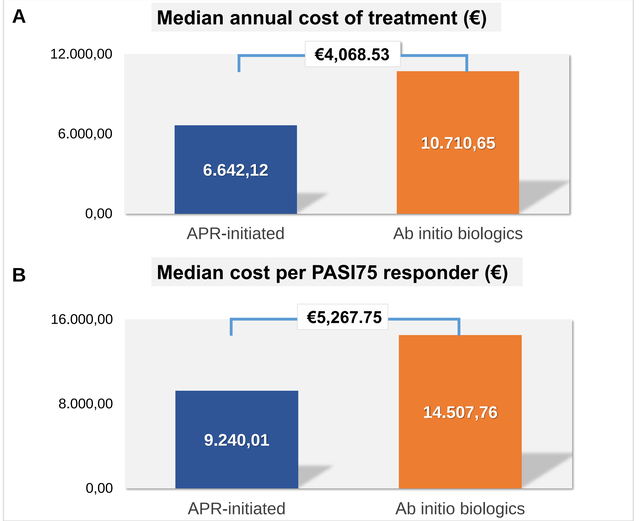
APR treatment duration

- In APRAISAL, among the 44 patients who discontinued apremilast, 7 patients (15.9%) were switched to a biologic agent after a mean (SD) of 44.4 (50.1) days.

PASI75 response rate and treatment cost

- The 52-week PASI75 response rates considered for APR/UST/SEC/BROD/ADA were 72.6/78.2/91.6/87.0/56.0%.
- A median (IQR) difference of €4,068.53 (€504.32-€8,185.72) in annual cost of treatment per patient was calculated between 'APR-initiated' and 'ab initio biologics' groups (**Figure 3A**).
- The difference in cost/PASI75 responder between 'APR-initiated' and 'ab initio biologics' groups was €5,267.75, favoring APR (**Figure 3B**).

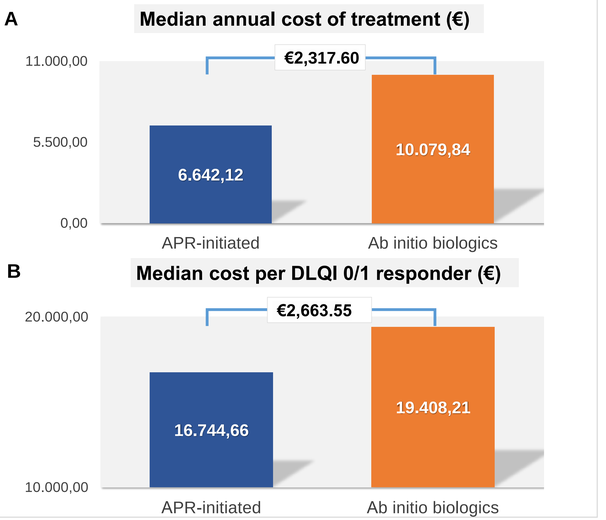
FIGURE 3. Treatment cost: scenario 1 - PASI75



Annual cost per DLQI 0/1 responder

- 52-week DLQI 0-1 response rates considered APR/UST/SEC/ADA were 40.0/59.2/71.6/37.9%.
- A median (IQR) difference of € 2317.60 (504.32-8185.72) in annual cost of treatment per patient was calculated between 'APR-initiated' and 'ab initio biologics' groups (**Figure 4A**).
- The difference in cost per DLQI-0/1 responder between 'APR-initiated' and 'ab initio biologics' groups was €2,663.55, favoring APR (**Figure 3B**).

FIGURE 4. Treatment cost: scenario 2 - DLQI 0/1



CONCLUSIONS

- Compared to commercially available biologics/biosimilars, in the Greek healthcare environment, potential cost-savings favoring APR were observed upon its initiation prior to biologics, in biologic-treatment naïve patients with moderate plaque psoriasis.
- APR may fulfill an important gap in the treatment armamentarium of psoriasis by providing a promising treatment option, while being more convenient and cost-effective than biologics.

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1. Otezla 30 mg tablets. Summary of product characteristics. Uxbridge, UK: Celgene Ltd; April 2019.
2. Physician Market Research (Oct-Nov 2020); IQVIA Consulting analysis - Brands performance was calculated based on market shares as stated by Dermatologists in the market research of Oct-Nov 2020 Syndicated AIM Biologics Market Sizing, December 2020.

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DISCLOSURES

ES: Novartis, UCB Pharma, Abbvie, Leo, Janssen, Genesis Pharma, Pfizer - speaker honoraria and honoraria for advisory boards; **VC**: Honoraria for advisory boards, speaker, investigator: Abbvie, Janssen, LEO Pharma, Novartis, Genesis Pharma, Menarini, Lilly; **EG**: UCB - investigator fees; **IK**: Genesis Pharma, LEO Pharma, AbbVie, Novartis, Janssen, Pfizer, UCB – investigator/speaker honoraria; **EL**: AbbVie, Eli Lilly, Genesis Pharma, Janssen, LEO Pharma, Novartis, UCB, Mylan, Roche and Sanofi – speaker, consultant, investigator fees; **NR**: AbbVie, Galderma, Genesis Pharma, Jannses, Leo, Lilly Pharmaserve, Novartis, UCB – speaker honoraria; **ON**: AbbVie – paid investigator; **AD**: Genesis Pharma – speaker, investigator fees; **KDT**: Genesis Pharma – investigator and consultant fees; **ER**: No conflicts of interest to disclose; **CK**: No conflicts of interest to disclose; **EP**: Genesis Pharma, Janssen, LEO Pharma, Novartis, and UCB – speaker, consultant, and/or investigator honoraria; **PA**: AbbVie and UCB – paid investigator and/or speaker honoraria; **MP**: Genesis Pharma – investigator fees; **AP**: No conflicts of interest to disclose; **KM**: No conflicts of interest to disclose; **IL**: Genesis Pharma, Novartis, Pfizer, LEO PHARMA – consultant and investigator fees; **EZ**: AbbVie, Bioderma, Eli Lilly, Genesis Pharma, Janssen, LEO Pharma, Novartis, UCB and Principia Biopharma + Sanofi Genzyme – speaker, investigator fees; **KK**: Genesis pharma – investigator and consultant fees, Sanofi, UCB, BGP – consultant fees; **EP**: Novartis – investigator fees; **NA**: Genesis Pharma – employment; **AK**: Genesis Pharma –employment; **ZA**: formely at Genesis Pharma; **MP**: AbbVie, Genesis Pharma, Janssen, LEO Pharma, Novartis, and UCB – paid investigator and/or speaker honoraria.

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