Background
Apremilast is a phosphodiesterase 4 inhibitor. Two pivotal trials were carried out comparing apremilast to placebo in plaque psoriasis (PP). At week 16, significantly more patients taking apremilast achieved PASI75 (28.8% - 33.1%) in both trials, versus placebo (5.3% - 5.8%).

Purpose
To assess the adaptation of the PP treatment prescriptions of apremilast under the Hospital Protocol and its economic impact and to assess the percentage of patients which reached PASI75 at week 16.

Material and methods
A descriptive, retrospective study was conducted from March/2016 to October/2017 on apremilast prescriptions. Patients with PP treated with apremilast were included and data were available from medical-histories. According to the use-protocol (UP) of apremilast, it should be used in patients with PP which have any contraindication to biologic therapies (BT) such as immunosuppression, due to the fact that indirect comparisons suggested that it is less efficient than BT.

Results
After designing the UP of apremilast, 32 prescriptions from the Dermatology Department were registered. 34.37% of patients (11/32) met the requirements of use (contraindication of BT). If the compliance of the UP had been a 100%, 21 patients would have been treated with etanercept (the first line BT chosen in our centre). Thus, it would have lead a cost saving of 19.85% of the cost per patient/year in PP treatment since a year of treatment with etanercept costs 6245.52€, whereas with apremilast is 7794.2€. Data about initial PASI and PASI at week 16 were available in 56.25% (18/32), in which 27.77% reached PASI75 (5/18). Among 43.75% (14/32) of patients without PASI75 results, 42.85% (6/14) had no data about PASI, 42.85% (6/14) had not already reached week 16 and 14.28% (2/14) the treatment had been withdrawn because of adverse events (AE). 25% (8/32) of patients do not currently continue with the treatment, 25% (2/8) of them because of AE and 75% (6/8) because of lack of efficacy.

Conclusion
The implementation of a consensual UP for new treatments such as apremilast could enhance the rational use of this drugs, but further collaboration with the physicians is needed to achieve a better optimization of the available resources.