

# COST AND DOSAGE OF BIOLOGICAL THERAPIES IN CLINICAL PRACTICE OF RHEUMATIC DISEASES

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## OBJECTIVES

- ▶ To describe dispensing pattern of tocilizumab, etanercept, adalimumab and infliximab in clinical practice.
- ▶ To calculate the annual median cost and compare with the theoretical annual median cost of these drugs in Rheumatoid Arthritis (RA), Ankylosing Spondylitis (AS) or Psoriatic Arthritis (PsA).
- ▶ To evaluate the percentage of dispensing median dose of the therapies in these rheumatic diseases.

## METHODS

- ▶ Observational retrospective study (from 01/01/2009 to 31/12/2013) with local Ethics and Clinical Investigation Commission approval (19/09/2014).
- ▶ At least 1 year with one of the therapies attended at Rheumatology and Pharmacy Services.
- ▶ Recommended dose: the official dose reported in medicinal product information.
- ▶ Cost was calculated according to the officially published price bulletin from Spanish Medication Agency.
- ▶ Extraction of information: electronic medical history program and pharmaceutical care database.

## RESULTS

251 episodes of treatment, corresponded to 236 patients, were included. Changes in dispensing frequency was the most common posology adjustment.

Table 1: Dispensing pattern of biological therapies in clinical practice.

THERAPY	RA		AS		PsA		Total	
	Episodes of treatment	%	Episodes of treatment	%	Episodes of treatment	%	Episodes of treatment	%
Adalimumab	58	38,9	24	40,7	24	55,8	106	42,2
Etanercept	51	34,2	23	39,0	15	34,9	89	35,5
Infliximab	22	14,8	12	20,3	4	9,3	38	15,1
Tocilizumab	18	12,1	NA	NA	NA	NA	18	7,2
<b>Total</b>	<b>149</b>	<b>59,4</b>	<b>59</b>	<b>23,5</b>	<b>43</b>	<b>17,1</b>	<b>251</b>	<b>100</b>

Figure 1. Description of statistical differences in real annual median cost per episode of treatment between two subcutaneous therapies in each pathology. U Mann-Whitney Test (\*p-value < 0,05).

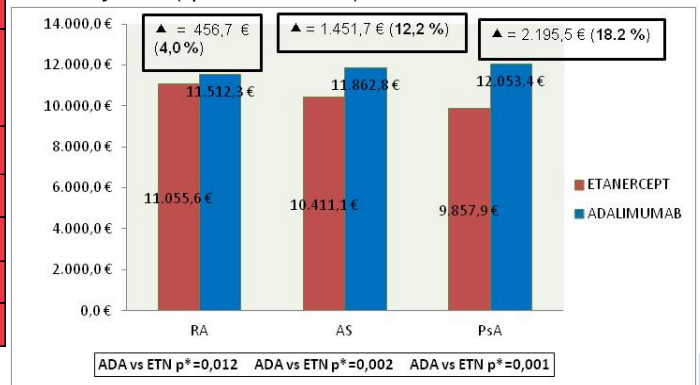
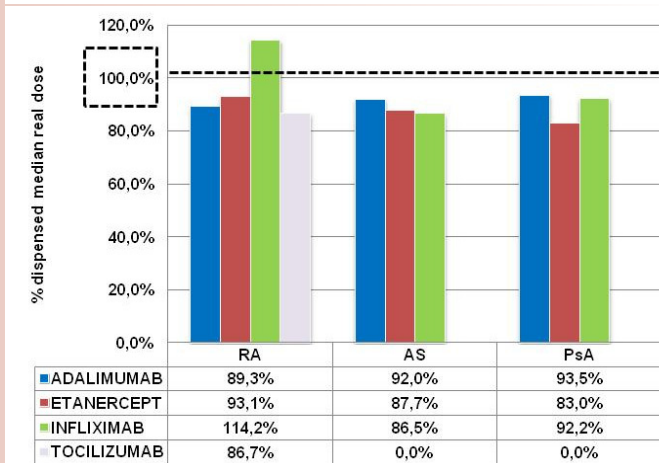
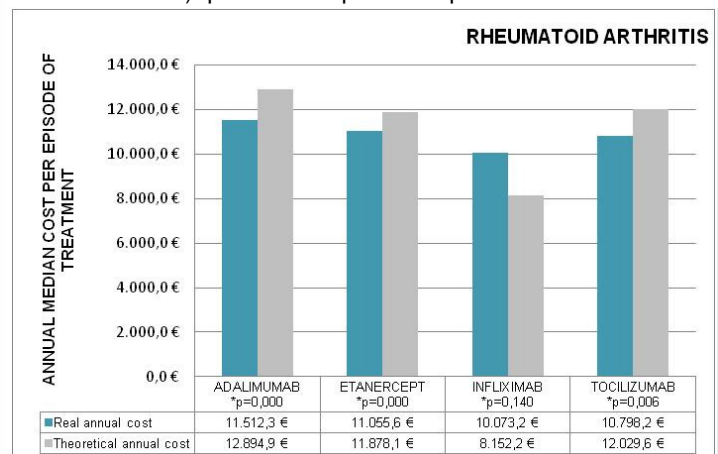


Figure 2. Percentage of dispensed median real dose compared with recommended dose.



p-value (H Kruskal-Wallis Test): RA: 0,000; AS: 0,385; PsA: 0,139

Figure 3. Description of statistical differences between real annual median cost and theoretical annual median cost per therapies in RA. \*p-value < 0,05 (Wilcoxon Test = real cost vs. theoretical cost) per all therapies except for infliximab.



## CONCLUSIONS

- ▶ Real dosage of etanercept, adalimumab and tocilizumab is lower than the recommended dosage.
- ▶ The real annual cost should be taken into account to choose one biological therapy.