



COSTS OF EARLY RHEUMATOID ARTHRITIS PATIENTS BY TYPE OF TREATMENT: RESULTS FROM THE ESPOIR EARLY ARTHRITIS COHORT



Bruno FAUTREL¹, Sandy LUCIER², M-Laure LAROCHE², Sabrina DADOUN¹, Mathilde BENHAMOU¹, Alain SARAUX³, Isabelle DURAND-ZALESKI², Francis GUILLEMIN⁴, Karine CHEVREUL².

¹Universit  Paris 6 - Pierre et Marie Curie – Paris VI; APHP – Department of Rheumatology, Piti  Salp tri re University Hospital; Paris France. ²URC Eco, AP-HP, Paris France. ³Universit  de Brest; Department of Rheumatology; University Hospital; Brest, France. ⁴INSERM CIC-EC / EA 4360 APEMAC; School of Public Health, Nancy 1 University; Nancy, France.

BACKGROUND

Many studies have explored the economic burden of established RA but only little information is available about the cost of early arthritis (EA) or early rheumatoid arthritis (ERA) and the impact of biologics in daily practice.

OBJECTIVE

To assess the cost of EA-patient care during the first 3 years of the disease in daily practice and to determine the part attributable to biologics in such a context.

METHOD

COHORT STUDY

The ESPOIR EA cohort is a nationwide project that included 813 EA patients, suspected of RA diagnosis, between 2002 and 2005. A ten-year follow-up is planned. When the economic evaluation was started in 2009, only data from the first 3 years of follow-up were available.

Among the 813 ESPOIR patients, only 577 patients went for all the cohort visits – 6-monthly during the first 2 years then annually – and had thus complete 3-year data, including:

- Patient characteristics, i.e., demographics, social information, medical information about RA and comorbidities.
- Health care resource use, i.e., consultations, hospitalizations, workups, drug consumption, etc...

COST OF CARE

Health care consumption was valorized in 2007 euros ( ) using national public health insurance tariffs:

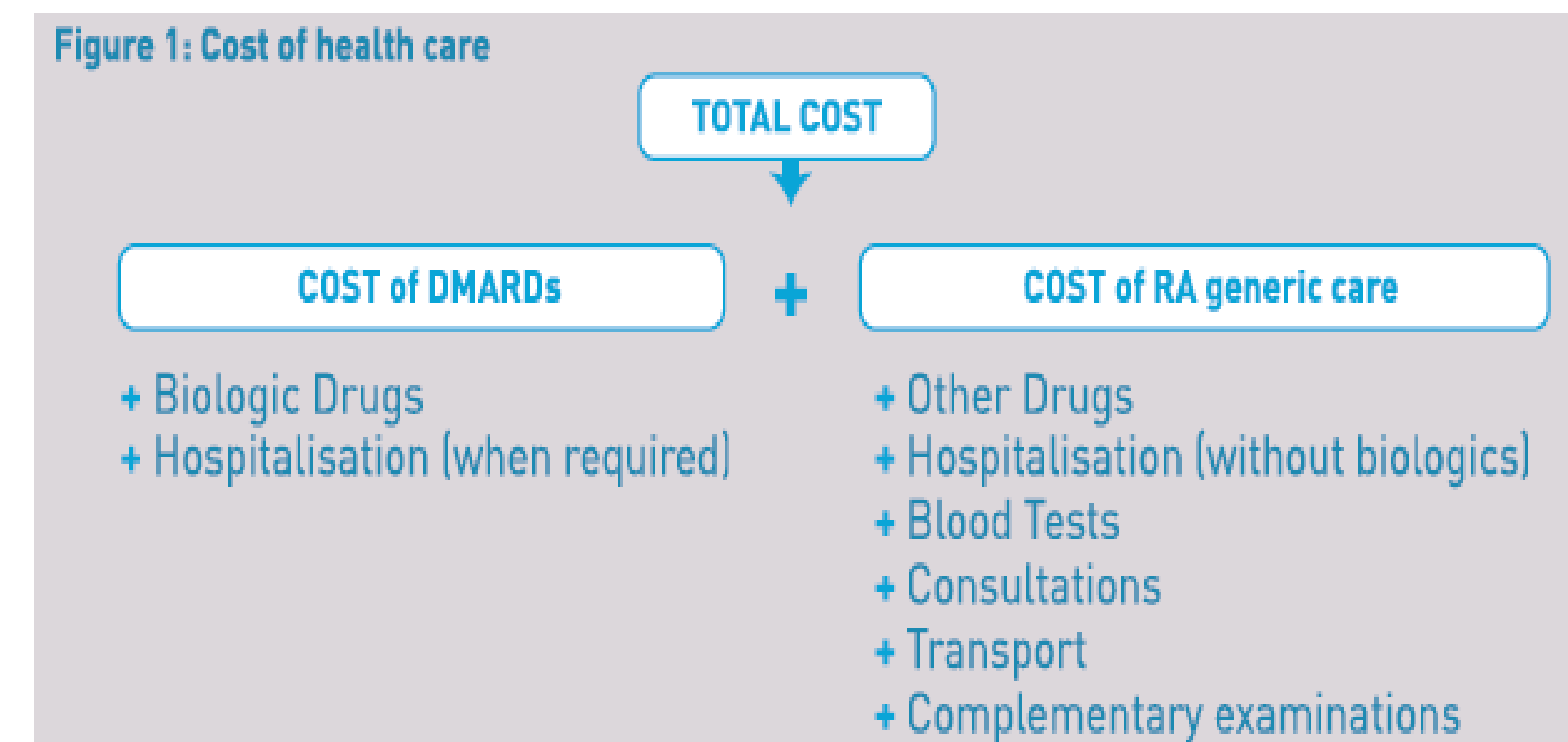
- CCAM for consultations and workups;
- Reimbursement tariffs for drugs;
- ECN (V10) for hospitalizations.

RA Costs were disentangled in 2 parts (figure 1):

- **Cost of RA therapy with DMARDs**, categorized in synthetic DMARDs and biologics including costs of day hospitalization for IV biologics.
- **Cost of RA generic care**, integrating all other expenses to care the patients.

STANDARDIZED COSTS

In order to compare costs across treatment groups, we adjusted the cost based upon disease severity using the patients' HAQ score (Health Assessment Questionnaire).



RESULTS

PATIENTS

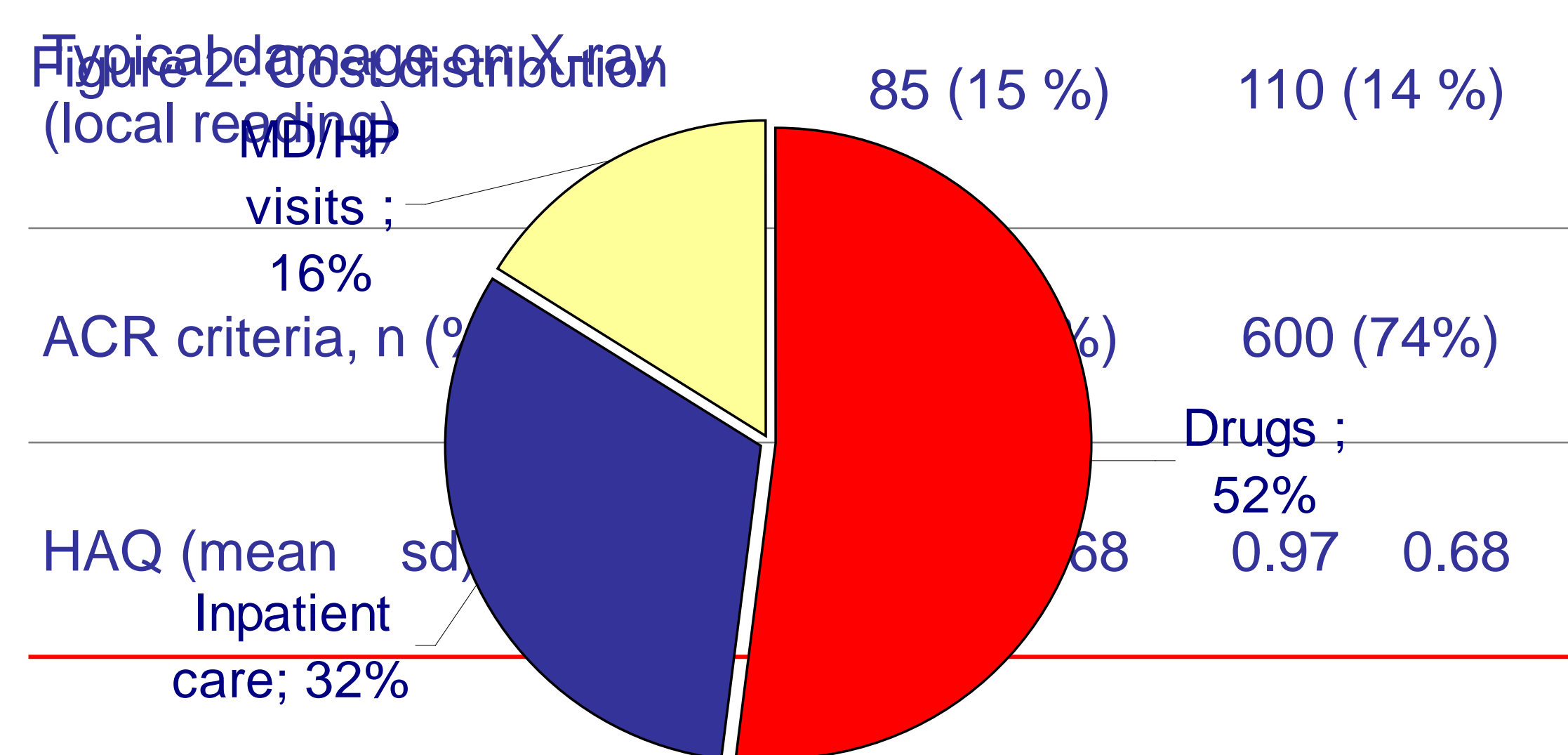
The characteristics of the 577 patients included in the economic study and those of the 813 ESPOIR patients are presented in Table 1.

Baseline characteristics (mean sd) or n (%)	Eco study N=577	ESPOIR* N=813
Age, years	45.1 10	48.1 12.5
Female sex,	441 (77%)	624 (77%)
Disease duration, days	225 235	214 253
DAS 28 (mean, sd)	5.1 1.3	5.2 1.5

AVERAGE ANNUAL MEDICAL COST PER PATIENT

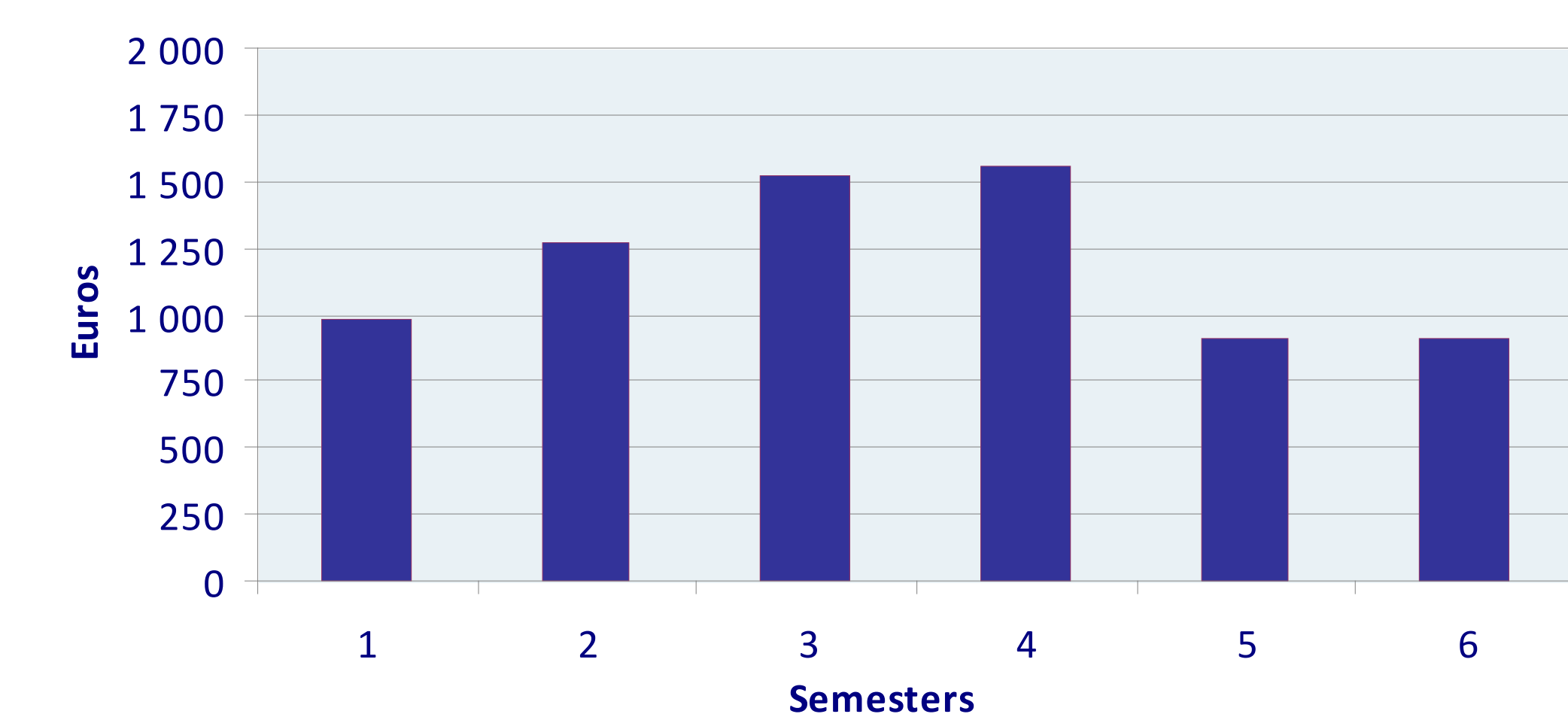
Average annual medical costs were estimated to 2,676   per patient, ranging from 17   to 32,246   (13 % - 315 (39 %)).

More than half of the costs were related to RA drugs.



EVOLUTION OF COSTS DURING THE 3 FIRST YEARS OF FOLLOW-UP

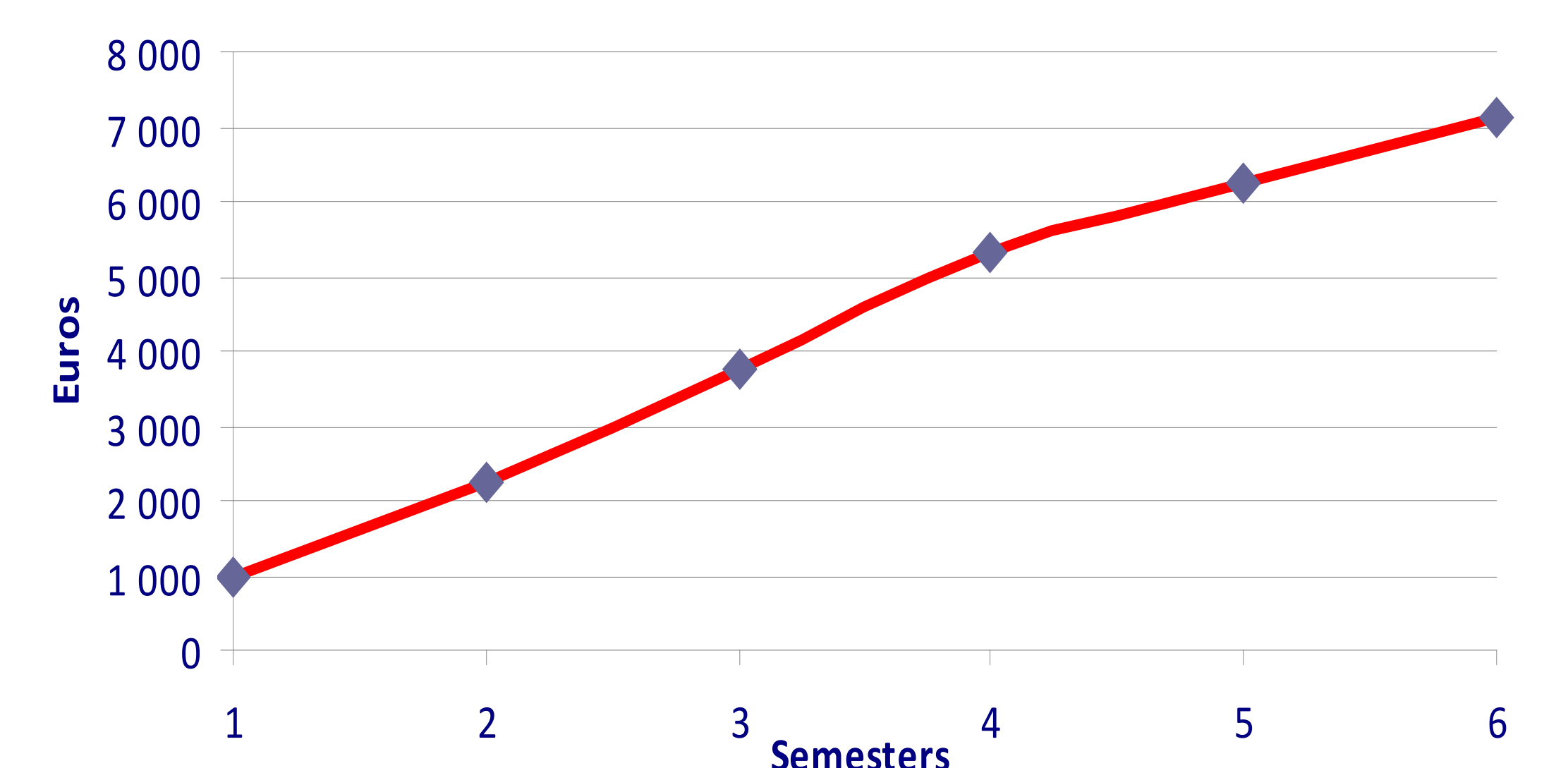
Figure 3: Total medical costs per 6-month interval



CUMULATIVE TOTAL MEDICAL COSTS DURING THE 3 FIRST YEARS OF FOLLOW-UP

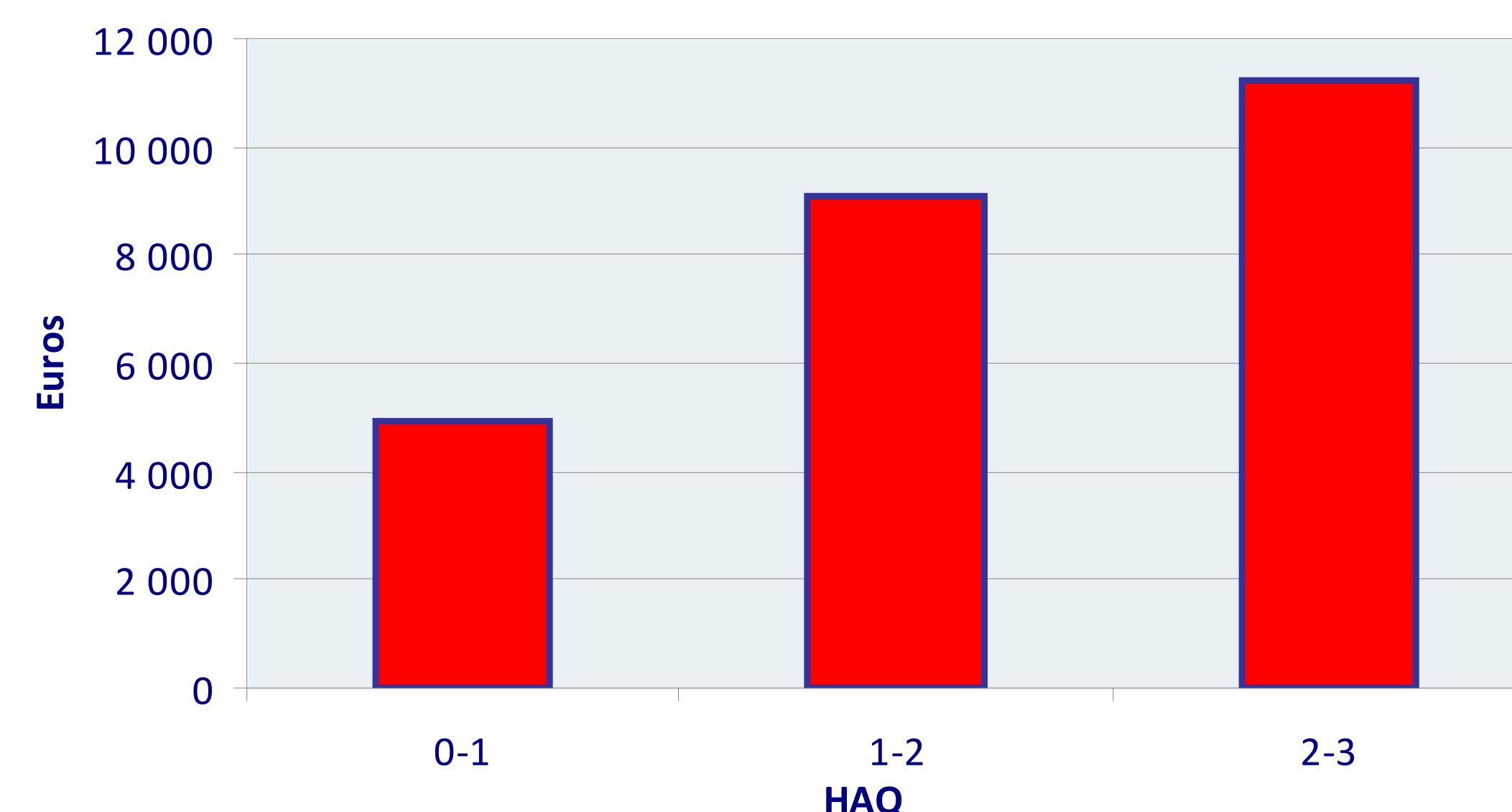
Mean cumulative total medical costs was estimated to 7,137   per patient over the 3 years of follow-up.

Figure 4: Cumulative total medical costs over the first 3 years of follow-up



As expected, cumulative medical costs were highly dependent on disability status, as measured by the HAQ: average costs ranged between 4,951   per patients when HAQ is less than 1 – mild disability – to 11,247   for patients with HAQ higher than 2 – severe disability.

Figure 5: Cumulative total medical costs over the first 3 years of follow-up depending on the level of disability



CONCLUSION

The costs incurred by EA patients in daily practice is substantial. The greatest share was the cost of drugs, especially biologic agents. Complementary analyses are on-going to evaluate the impact of diagnosis (RA versus undifferentiated arthritis) and of optimized therapeutic strategies on RA care costs.

*Combe B et al. Joint Bone Spine 2007;74(5):440-5.

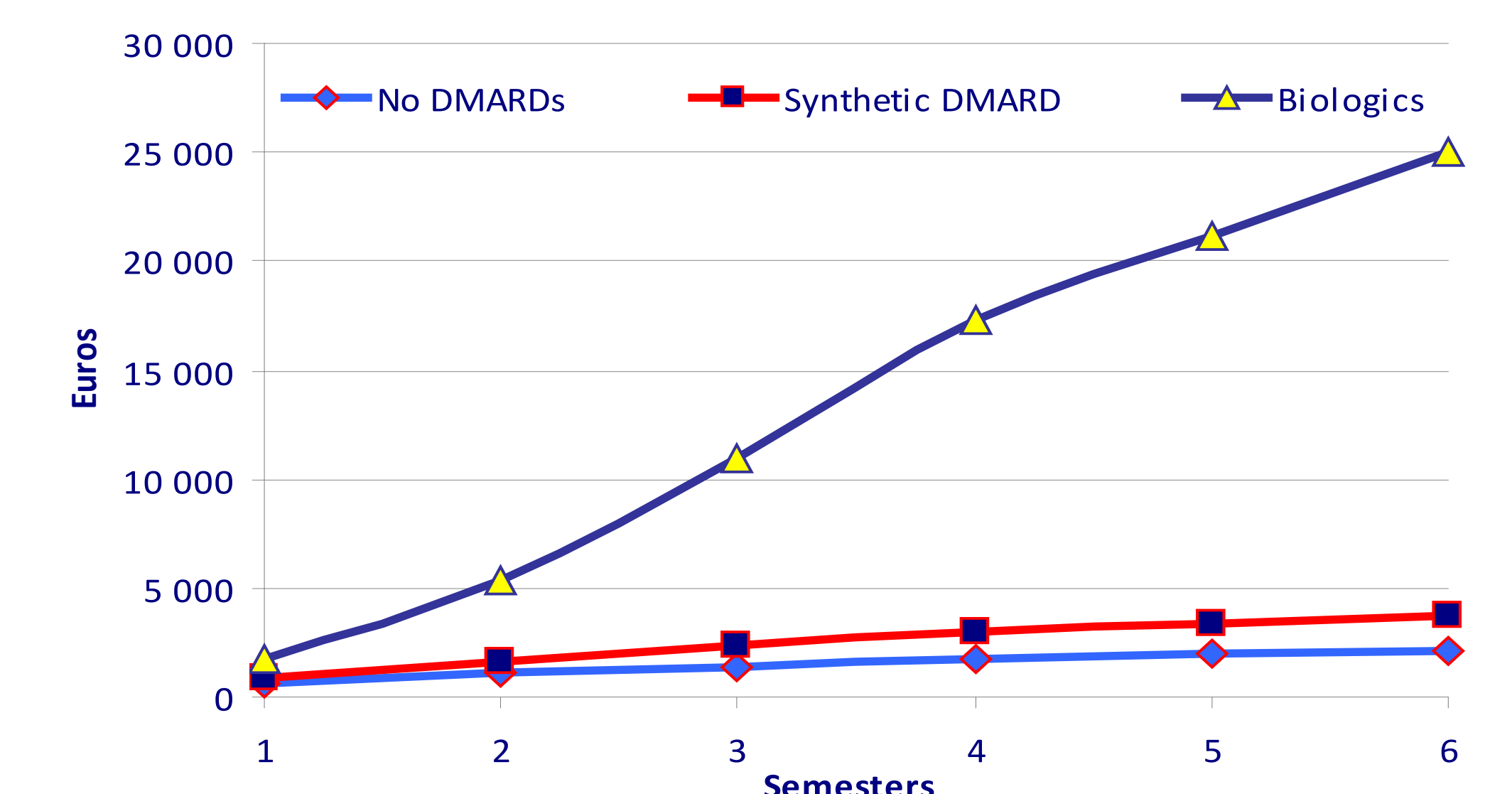
CUMULATIVE TOTAL MEDICAL COSTS DURING THE 3 FIRST YEARS OF FOLLOW-UP DEPENDING ON RA TREATMENT

Patients were categorized depending on RA-treatment type: - **No treatment**: patients who received no RA-specific DMARDs over the 3-year follow-up (likely mild RA or undifferentiated arthritis).

- **Synthetic DMARDs**: patients who received only synthetic DMARDs during the whole or a part of the 3-year follow-up.

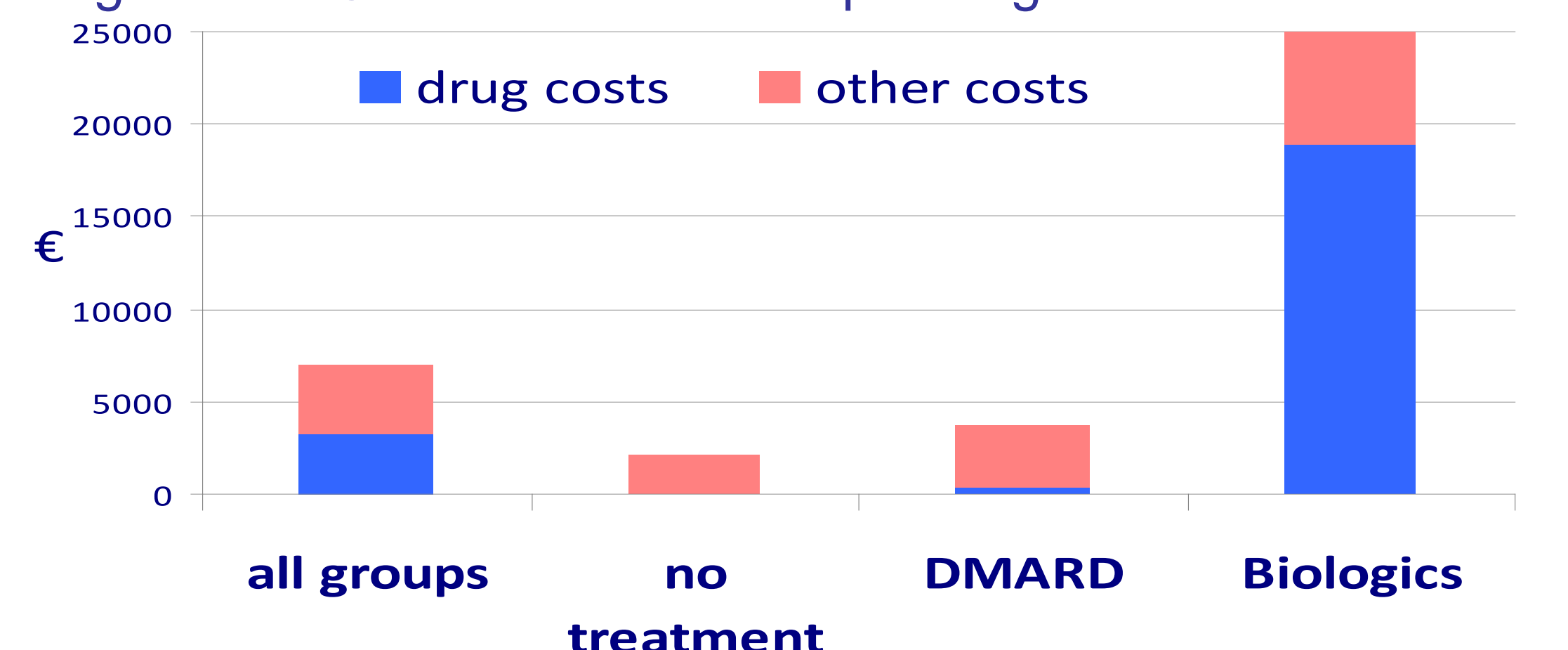
- **Synthetic DMARDs**: patients who received at least one biologic agent during the follow-up.

Figure 6: Cumulative total medical costs over the first 3 years of follow-up depending on RA treatment



As expected, RA drugs represented a major part of the overall medical costs in patients who ever received one or more biologics agents during the follow-up.

Figure 7: Costs breakdown depending on RA treatment



ACKNOWLEDGEMENT

An unrestricted grant from Merck Sharp and Dohme (MSD) was allocated for the first 5 years of the ESPOIR study. Two additional grants from INSERM were obtained to support part of the biological database. The French Society of Rheumatology, Abbot, Wyeth and Amgen also supported the ESPOIR cohort study. We also wish to thank Nathalie Rincheval for expert monitoring and data management and all the investigators who recruited and followed the patients (F. BERENBAUM, Paris-Saint Antoine; MC. BOISSIER, Paris-Bobigny; A. CANTAGREL, Toulouse; B. COMBE, Montpellier; M.DOUGADOS, Paris-Cochin; P FARDELONNE et P BOUMIER, Amiens; B. FAUTREL, P BOURGEOIS, Paris-La Piti ; RM. FLIPO, Lille; Ph. GOUPILLE, Tours; F. LIOTE, Paris- Lariboisi re; X. LE LOET et O VITTECOQ, Rouen; X MARIETTE, Paris-Bic tre; O MEYER, Paris Bichat; A.SARAUX, Brest; Th SCHAEVERBEKE, Bordeaux; J. SIBILIA, Strasbourg).