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LESSONS TO BE LEARNED: BEST AND WORST RESULTS FROM A 7 YEAR OLD CLINICAL DATABASE OF SCOLIOSIS PATIENTS

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PURPOSE/BACKGROUND
To verify which patients can reach the best and worst results during conservative treatment, since it is not yet known from previous researches.

METHODS
All scoliosis patients with more than 2 visits included in a prospective clinical database started in September 2003 were reviewed on August 31st 2010. A cut-off of 20 degrees (improvement or worsening) from the first observation was used to select patients. Patients were analysed for diagnosis, morphology, °Cobb at start, curve improved/worsened, treatment, gender, Body Mass Index, clinical parameters.

RESULTS
Out of 1886 consecutive patients (TP), 62 (3.3%) changed 20° or more: 26 (1.4%) improved (range 20-34°) (IP), 36 (1.9%) progressed (20-60°) (PP).
Females prevailed in IP and low BMI in PP.
In PP prevailed juveniles (35% vs 15%-23.8% in IP-TP); conversely, secondary scoliosis prevailed in both PP and IP (25%-15% respectively vs 1.9% in TP).
In IP there were only patients who started over 30° Cobb (100%), while in PP 47% started between 10 and 19°; corresponding percentages in TP were 33.9% and 28.5% respectively.
Diagnosis of thoracolumbar single curve was the most common in IP (46% vs 22.1% in TP), while double in PP (67% vs 49.8% in TP).
Curves improved were thoracolumbar (IP: 58%), worsened thoracic (PP: 78%).
Only patients who had a good or optimum treatment improved, but this was true also in 56% of progressed.

CONCLUSION
Since these results are not similar to what would be expected according to the known natural history, conservative treatment appears able to change it.

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IT IS POSSIBLE TO MAKE PATIENTS USE BRACES THE HOURS PRESCRIBED: FIRST RESULTS FROM THE THERMOBRACE CLINICAL EVERYDAY USAGE

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PURPOSE/BACKGROUND
Compliance to bracing has been questioned, and temperature sensors advocated to check it. Since 2010 we started the everyday clinical use of a temperature sensor (Thermobrace): aim of this study is to present the results of the first patients.

METHODS
Population: 68 scoliosis consecutive patients (79% females, age 14.2±2.4) who accepted to use Thermobrace and had finished at least one period of treatment on the 31st December 2010.
Actual hours worn per day were measured; compliance (percentage of prescription) and reported compliance (percentage of hours reported by the patient) were calculated. For reliability purposes, we use two different data processing methods.

RESULTS
Brace prescription was 16 to 23 hours per day. Average Thermobrace use was 5.25±2.25 months. Referred compliance was 94.3% (range 50-113%), the real one 86.1% (range 55-108%) or 89.9% (range 57-111%) according to the two different measurement methods. More than half of the patients had at least a 90% compliance with both readings. No wearing days were 1.0% of total and involved only 29% of patients.

CONCLUSION
Compliance is neither due to type of treatment, nor to the patient alone. SOSORT criteria for bracing clearly state the importance of the treating team in this respect. This is the first study using a temperature sensor in a setting respecting SOSORT criteria, and shows compliance to bracing much higher than what was previously reported. In the everyday clinics, Thermobrace offers a valuable insight to increase compliance even further, and make treatment rely on real data.