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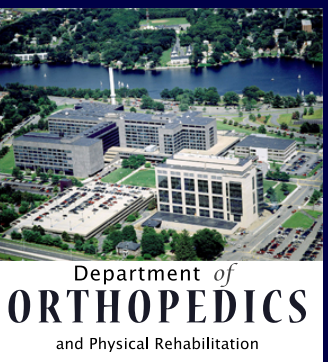
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# Changes in Patient Reported Symptoms During the Natural Progression of Osteoarthritis

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## BACKGROUND

Arthritis is the leading cause of disability and second most costly chronic condition in the United States (1 & 2). Physical Activity is a challenge in patients with OA (3).

We quantitated the patient-reported changes in pain and function during the natural progression of OA and correlated these metrics with objective activity monitors.

## MATERIALS & METHODS

50 patients who were undergoing non-operative management of OA were enrolled.

Visit Intervals: Baseline, 3 months, 6 months, 9 months

Data Collection:

- Basic Demographics
- Patient Reported Outcomes: SF-36, WOMAC, Charlson Co-Morbidity Index
- Objective Measures: ActiGraph and activPal\*

\* Worn for 7 days after visit

## RESULTS

### Basic Demographics

- ◆ Average Age: 57 years
- ◆ 80% had 1 or fewer medical co-morbidities
- ◆ 4% used an assistive device
- ◆ Average BMI: 33.85

### Activity Monitor:

- Trend of increased % day sedentary, decreased steps/day. Table 1.

### Patient - reported Measures:

- ◆ WOMAC Function: Average=68; NO change over time (0-100; moderate limitations)
- ◆ SF-36: Average PCS = 38; NO change over time (0-100; moderate limitations)
- ◆ If WOMAC Pain Score <80 (moderate pain); average SF36 PCS =36
- ◆ If WOMAC Pain Score >80 (mild pain); SF36 PCS =42.5

Table 1: Objective data from activPAL™ the initial 19 patients enrolled.

	%SED	%STAND	%STEP	STEPS	STEP RATE (steps per minute)	MVPA (minutes)
<b>Baseline</b>	62.8 ± 2.39	28.0 ± 1.98	9.2 ± 0.78	6446 ± 570	37.7 ± 0.94	52.6 ± 4.79
<b>3-Mos</b>	63.9 ± 2.40	28.0 ± 1.99	8.1 ± 0.79*	5359 ± 572*	36.6 ± 0.94*	42.6 ± 4.80*
<b>6-Mos</b>	62.6 ± 2.40	28.7 ± 1.98	8.7 ± 0.78	5868 ± 570	37.3 ± 0.94	47.1 ± 4.79*
<b>9-Mos</b>	67.1 ± 2.40*	24.7 ± 1.99	8.1 ± 0.79*	5322 ± 572*	37.3 ± 0.94	43.5 ± 4.80*

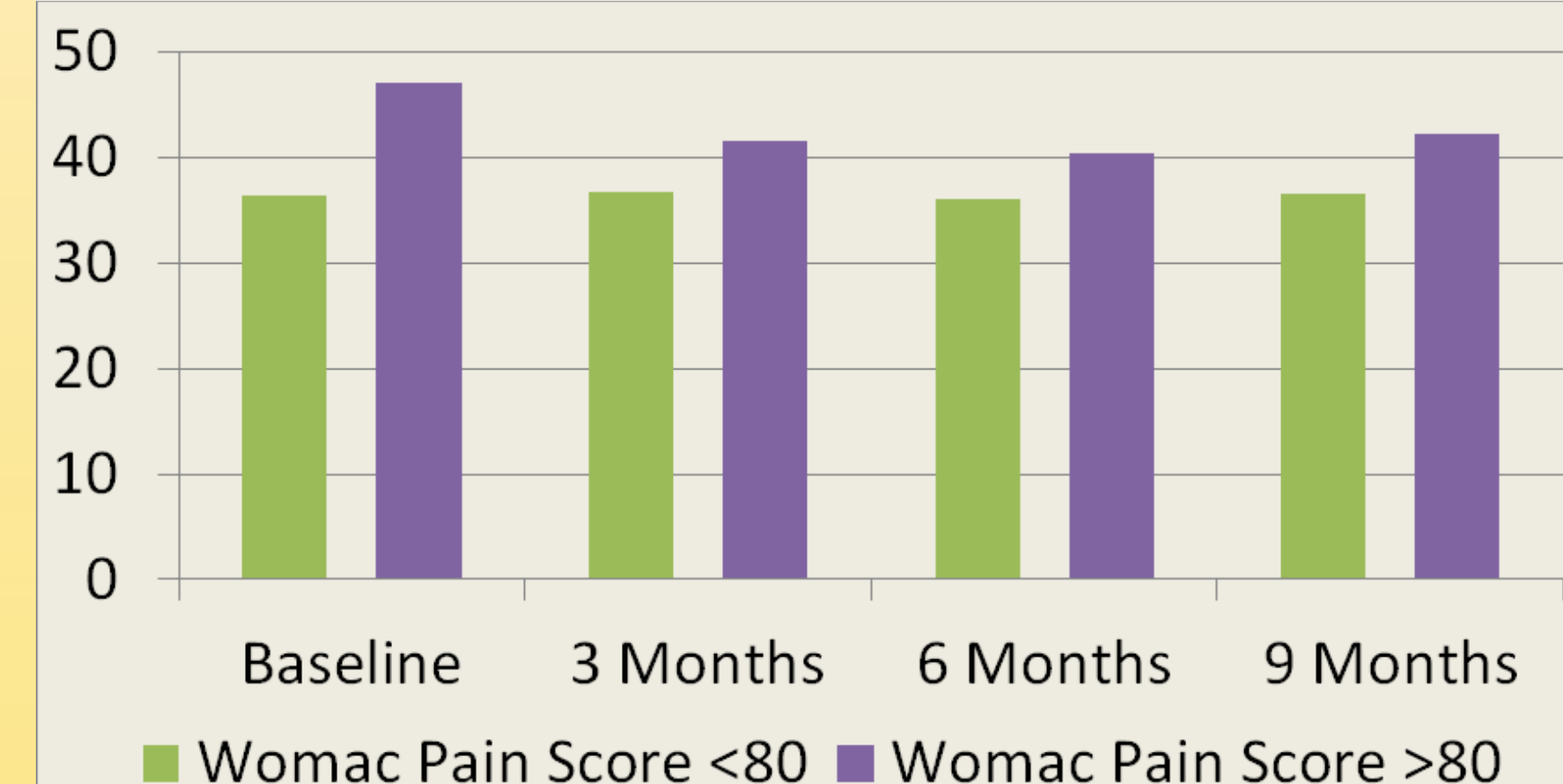
\*Significantly different from baseline (p<0.05)

## DISCUSSION

- ◆ Patient-reported function did not change over a 9-month period. However, preliminary objective activity data suggests a decline.
- ◆ Further analyses will correlate patient-reported measures with objective measures recorded by activity monitors to determine if objective monitors are preferable to detect early changes in activity due to OA.

Figure 1: Difference in SF-36 PCS between patients starting with a WOMAC Pain Score <80 and those starting with a WOMAC Pain Score >80, displayed at the 4 different study time points.

### Correlation between WOMAC and SF-36 PCS



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