

# INDIRECT COSTS OF MODERATE AND SEVERE FORMS OF PSORIASIS IN CZECH REPUBLIC: CALCULATION BASED ON SELF REPORTED QUESTIONNAIRE

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## Objectives

Psoriasis (prevalence of 2 to 3%) is not directly a life threatening disease, however patients suffering from psoriasis and psoriatic arthritis reveal significantly lower quality of life<sup>1</sup>. This QoL deterioration comes together with their productivity loss and disability. It implies from an Italian study that indirect costs represent about 30% of total cost of psoriasis<sup>2</sup>. Other studies in United States declare that indirect cost of psoriasis represent 40% or even more than 50% of all costs of psoriasis<sup>3,4</sup>.

There are just few studies calculating the whole societal burden of psoriasis in Central and Eastern Europe. Therefore, we calculated indirect costs (from government budget perspective) of psoriasis in Czech Republic.

## Results

Average patients' age was 45.34 years (23-62 years), average time from diagnosis was 23.9 years. Mean BSA index and PASI score were 26.78% and 13.32, respectively. Occurrence of psoriatic arthritis was 34.1%. Percentage of full-time and part-time disabled patients was 9.5 and 6.1%, respectively. 18.4% of patients reported incapacity to work with average duration of 28.8 workdays in previous 6 months (see Table 2).

Mean indirect costs associated with absenteeism, part-time disability pension and full-time disability pension were €214, €168 and €414, respectively, for one patient per one year (see Figure 1). The biggest driver for height of indirect cost of psoriasis was occurrence of psoriatic arthritis (see Figure 2 and Table 3). Psoriatic patients without psoriatic arthritis revealed 49.8% lower indirect costs in contrast to patients suffering from psoriatic arthritis.

Figure 1. Distribution of indirect cost for one patient per one year

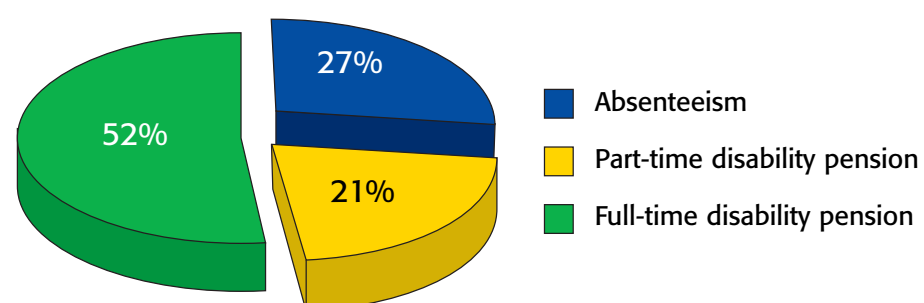


Figure 2. The height of indirect cost according to presence of psoriatic arthritis

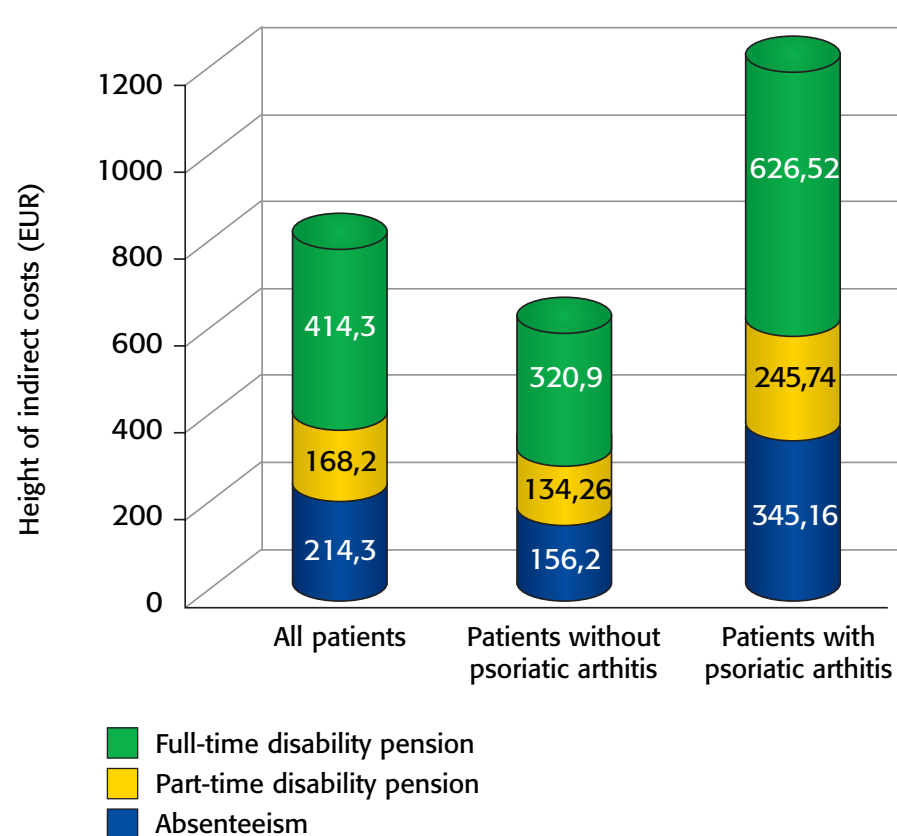


Table 3. The height of indirect cost according to presence of psoriatic arthritis

	All patients	Patients without psoriatic arthritis	Patients with psoriatic arthritis
Absenteeism	214,3	156,2	345,16
Part-time disability pension	168,2	134,26	245,74
Full-time disability pension	414,3	320,9	626,52
Alltogether	796,8	611,36	1217,42

## References

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## Methods

This calculation was based on 6 months-retrospective self-reported questionnaire. We included 179 patients with psoriasis, aged 18-62 years either at working status, part-time disabled or full-time disabled. For calculation of indirect costs we included costs associated with absenteeism (number of missed workdays) and costs associated with disability pension. In Czech Republic, disability pension is divided into full-time and part-time disability pension.

We used friction costs approach (FCA) with defined friction period of 6 months (130 workdays). The height of average monthly income in year 2009, €851.3 and height of average monthly part-time disability pension and full-time disability pension €229.44 and €365.61, respectively were used as denominators (see Table 1). Indirect costs were expressed as mean value for one patient with moderate to severe form of psoriasis per one year - 2009. Clinical data (PASI score, BSA index and QoL) were collected by dermatologists.

Table 1. Method calculation overview

Friction cost period	6 months (130 workdays)
average monthly income	€851.3
average monthly part-time disability pension	€229.44
average monthly full-time disability pension	€365.61

Table 2. Patients characteristics

Number of patients	179
Number of patients with psoriatic arthritis (%)	61 (34.1)
Age; mean (range)	44.34 (18 - 62) years
Mean time from diagnosis (SD)	23.9 (10.72) years
Mean BSA (SD)	26.78% (20.1)
Mean PASI (SD)	13.32 (10.1)
Mean QoL (EQ-5D; DLQI)	0.779; 10.26
Patients' absenteeism (%; mean number of days)	18.4%; 28.8 days
Patients' full-time disability (%)	9.5%
Patients' part-time disability (%)	6.1%

## Conclusion

By using friction cost approach total mean indirect cost of patients with moderate to severe forms of psoriasis was €796 for one patient per one year. This amount represents approximately 55% of indirect costs of psoriasis in Germany in 2005<sup>5</sup>. The height of indirect cost was correlated with both clinical parameters - PASI score and BSA index, however better predictor for height of indirect costs seemed to be QoL, either expressed in EQ-5D or DLQI (see Figure 3).

Figure 3. Dependence of QoL on height of indirect costs of patients with moderate to severe forms of psoriasis

