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## **Physical activity of patients with myeloproliferative neoplasms - a multicenter survey of the East German Study Group for Hematology and Oncology (OSHO #97)**

Bewegungsverhalten von Patient\*innen mit Myeloproliferativen Neoplasien – eine multizentrische Studie der Ostdeutschen Studiengruppe Hämatologie und Onkologie (OSHO #97)

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**Introduction:** Patients (pts) with myeloproliferative neoplasms (MPN) often suffer from cancer-related fatigue (CrF), bone/muscle pain, and other symptoms affecting quality of life (QoL). CrF as well as pain are barriers to physical activity (PA). To date, it is unknown which impact MPN has on pts PA and what distinguishes the active pts from inactive. In order to elucidate the current situation, we investigated the PA of MPN pts in relation to their respective symptom burden and QoL.

**Methods:** A multicenter cross-sectional study was performed from 01/21 to 09/21. The one-time anonymous survey was conducted analog (pts, who had a medical consultation at 12 OSHO institutions) and online (MPN pts network (D, AUT, CH), and LeukaNET/leukemia pts network). Recorded were demographics, symptoms (0 - absent, 100 - worst imaginable), and QoL (0 - very poor to 100 - very good). The Godin Leisure-Time Exercise Questionnaire (GLTEQ) and the five stages of the transtheoretical behavioral change model (TTM) were used to assess habitual leisure-time activity and the practice of regular sporting activity (at least 20` 3-times/week). Based on the results (QLTEQ score, TTM), three groups ("inactive," "non-targeted active," and "targeted active") were defined and compared in terms of demographics, symptoms, and QoL.

**Results:** A total of 634 questionnaires were analysed (63% female, mean age 57±14 years). Dominant symptoms were CrF (38±21), bone/muscle pain (30±27), and concentration problems (30±29). The QoL was given as a mean of 67±21. According to GLTEQ score, 110 pts (19%) were insufficiently physically active, 109 (19%) moderately active and 361 (62%) active. By self-reported, 257 pts (43%) do sport regularly. The “inactive” pts were older than the physically active groups (60±16 vs. 56±13 or 55±13 years). The “inactive” and the “non-targeted active”

show no differences in symptoms and QoL ( $60\pm 23$  vs.  $63\pm 21$ ). The “targeted active” showed a lower symptom burden and a higher QoL ( $73\pm 20$ ) compared to the “inactive” and “untargeted active”.

**Conclusion:** Insufficient PA in MPN pts appears to be primarily motivational. Therefore, reducing symptom burden alone does not seem to have an impact on the amount of PA. But there exists a bidirectional relationship between symptoms and PA. Therefore, the impact of targeted PA on symptoms and QoL should be investigated. Our data suggest that the quality of exercise has a greater impact on symptom burden and QoL than the amount of PA.

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