How do we overcome the research-to-practice gap? Implementation of evidence into the rheumatology practice

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DEVELOPMENT OF AN INTERDISCIPLINARY NURSE-COORDINATED SELF-MANAGEMENT INTERVENTION (INSELMA) FOR PATIENTS WITH INFLAMMATORY ARTHRITIS
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Background: Up to 30% of patients with inflammatory arthritis (IA) do not respond sufficiently or tolerate the pharmacological treatment. Consequently, they may experience a substantial impact of their arthritis in everyday life. Even patients in remission or low disease activity state are at risk of substantial arthritis related symptoms and burdens. These patients need coherent interdisciplinary self-management support to manage symptoms and life with the chronic condition and increase their quality of life. A previous EUWARM review on the effectiveness of self-management interventions in patients with IA (1) found that well-structured self-management programmes were lacking or were poorly reported.

Objectives: This study aimed to develop a nurse-coordinated interdisciplinary self-management intervention, delivered in routine clinical care, for patients with inflammatory arthritis and with a substantial impact of their arthritis to support their self-management ability.

Methods: The study was planned across two Danish hospitals following the British Medical Research Councils (MRC) framework for developing and evaluating Complex Interventions (2). The development process consisted of four phases: 1) a comprehensive scoping review on patients support needs and elements in self-management interventions; 2) six workshops involving health professionnels (rheumatologists, nurses, physiotherapists, occupational therapists, a social worker and a psychologist) and 2 patient representatives from the two hospitals and staff from primary health care, 40 people in total; the workshops focused on ideas for the content, outline of the intervention and needs for competence development of the staff; 3) a goal-setting process involving the patient, relatives and the coordinating nurse; 3) Ongoing support to achieve the goals. The opportunities for support include individual consultations by the coordinating nurse (telephone, online or face-to-face, 2.5 hours in total), and a maximum of four consultations by a physiotherapist and or an occupational therapist. Also, support from primary care, and an online session by a social worker about social support opportunities are offered. Two team conferences led by the coordinating nurse can be held during the intervention period. A status consultation will be held after 6 months. A manual for the initial screening, inclusion, detailing the intervention, outcomes and additional materials to support the intervention was developed. Competence development of the health professionals who are to deliver the intervention was planned and completed.

Conclusion: A nurse-coordinated interdisciplinary self-management intervention (INSELMA) was developed and described based on MRC’s framework for the development of Complex Interventions. The intervention is ready for feasibility testing before adaptation and test in a subsequent Randomized Controlled Trial. REFERENCES:
Disclosure of Interests: None declared

Strengths and weaknesses of experimental models: Moving from animals to human clinical trials

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RADIOMIC SIGNATURES REFLECT TREATMENT RESPONSE TO NINTEDANIB IN PRECLINICAL LUNG FIBROSIS MODEL
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Background: Responses to anti-fibrotic drugs in preclinical disease models are difficult to quantify by histological analysis of single tissue sections. Quantitative in-depth analysis of imaging data, termed “radiomics,” may represent a more reliable and accurate measure of treatment response since the pathology of the whole organ is captured.

Objectives: To study the potential of µCT-derived radiomic features to reflect response to Nintedanib in the bleomycin (BLM)-induced murine model of fibrosing interstitial lung disease.

Methods: All C57BL/6J mice from both study groups were intratracheally instilled with 2U/kg BLM on day 0 to induce lung fibrosis. Nintedanib was administered daily by gavage at 60mg/kg for two weeks starting from day 7 (n=15). Controls received equivalent treatment with vehicle-only (n=19). Whole lung µCT scans (SkyScan 1176, Bruker) of each animal were acquired at baseline (day 0), pre-treatment (day 7), and post-treatment (day 21). The Ashcroft score was assessed on Sirius Red stained lung sections post-treatment. Lung volumes in µCTs were defined semi-automatically in MIM Software (6.9.2), followed by extraction of radiomic features with our in-house developed software Z-Rad (73.1). Each data set contained 1386 features, describing image characteristics with histogram, texture, and wavelet functions. Data pre-processing involved removal of features sensitive to intra- and interobserver delineation variability (ICC<0.75), highly correlated features (Pearson's r>0.95), and features not