Researchers develop first ever guideline for cancer screening in rare muscle disease

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Credit: University of Manchester

Researchers from the National Institute for Health and Care Research (NIHR) Manchester Biomedical Research Center (BRC) and University of Manchester have been instrumental in developing the first guideline

for cancer screening in an inflammatory muscle disease called "myositis," which has an increased cancer risk.

The international guideline for "Idiopathic Inflammatory Myopathy-Associated Cancer Screening: an International Myositis Assessment and Clinical Studies Group (IMACS) Initiative" was published in *Nature Reviews Rheumatology* at the beginning of November 2023 and led by Dr. Alexander Oldroyd.

Dr. Oldroyd is an NIHR Academic Clinical Lecturer within the Rheumatic and Musculoskeletal Diseases Theme (RMD) of the NIHR Manchester BRC and his research focuses on improving cancer screening in myositis.

The guideline provides a personalized roadmap for people with adult-onset myositis, a rare condition that can cause weak muscles, and offers 18 recommendations. Their main aim is to empower clinicians to detect cancer early, especially those at high risk, contributing to better overall outcomes.

He said, "The guidelines help categorize individuals into standard, moderate, or high-risk groups based on their myositis subtype, autoantibody status, and certain clinical features.

"The guideline details 2 screening panels: a 'basic' one with tests like chest radiography, and an 'enhanced' option with advanced techniques like CT scans and tumor markers.

"Guidance on timing and frequency of screening is also provided and tailored to individual risk levels. Additional procedures, like gastrointestinal endoscopy and PET–CT scans, are recommended in specific cases."

Myositis is an auto-immune muscle disease affecting approximately 10,000 people in the U.K. and evidence suggests up to 1 in 4 people with myositis will develop cancer within three years of diagnosis. Various cancers have been reported, including lung, ovarian, colorectal, lymphoma, breast and nasopharyngeal cancers among the most common. Myositis itself is currently treatable, not curable.

Dr. Oldroyd, NIHR Academic Clinical Lecturer at The University of Manchester within the Division of Musculoskeletal and Dermatological Sciences, presented the recommendations at the American College of Rheumatology conference.

The process to develop the guideline began in 2019, and the first part of the project involved conducting a meta-analysis and a systematic review. The expert group included 75 co-authors across 22 different countries.

Dr. Oldroyd, who is also a Rheumatologist at Salford Royal Hospital, part of Northern Care Alliance NHS Foundation Trust, added, "I am really proud that we now have an evidence and consensus base for cancer screening to improve outcomes, enabling earlier diagnosis and stimulating further research in this area.

"This global guideline will help clinicians risk-stratify a patient's individual characteristics using their disease sub type and enable a standardized approach across health systems to ascertain whether people will be at high, moderate or standard risk of cancer.

"Early detection of cancer is key to improving outcomes. Importantly we hope this will enable clinicians to plan how to screen for cancer in those patients and how often.

"Several Manchester BRC members are co-authors which highlights the capability of Manchester BRC in bringing together experts in

musculoskeletal disease, cancer and rare conditions. Thank you to everyone who has contributed to and supported this work."

The recommendations have been scientifically reviewed by the International Myositis Assessment and Clinical Studies Group Scientific Committee and endorsed by the International Myositis Society.

The RMD Theme is part of Manchester BRC's Inflammation Cluster along with three other research themes: Respiratory Medicine, Dermatology and Integrative Cardiovascular Medicine.

These conditions—which include arthritis and related conditions, chest diseases, skin disorders and heart disease—are all underpinned by chronic inflammation.

More information: Alexander G. S. Oldroyd et al, International Guideline for Idiopathic Inflammatory Myopathy-Associated Cancer Screening: an International Myositis Assessment and Clinical Studies Group (IMACS) initiative, *Nature Reviews Rheumatology* (2023). DOI: 10.1038/s41584-023-01045-w

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