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### A systematic review and meta-analysis of diagnostic accuracy of whole-body 18F-FDG PET and 18F-FDG PET/CT in detecting occult malignancy in patients with idiopathic inflammatory myopathy

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Furthermore, no correlation between CF positivity and the presence of digital ulcers at the moment of the blood sampling was verified; however, if we stratified patients according to their ongoing treatments (absence of an endothelin receptor antagonists therapy plus PDE5 inhibitors), a significant correlation between digital ulcers and CF positivity emerged (OR=8.14, 95% CI 1.03-64.5, p=0.0470, n=91).

**Conclusion:** Our preliminary results on this issue are extremely interesting as they can open new perspectives on the identification of cryofibrinogen as possible prognostic marker that could be involved in the pathogenesis of scleroderma digital ulcers and PAH. Moreover, therapies which are currently used for the treatment of PAH and the management of digital ulcers, could determine circulating cryofibrinogen disappearance, with possible challenging future impact on SSc therapeutic approaches.

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**Disclosure of Interests:** None declared

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POS0897

#### A SYSTEMATIC REVIEW AND META-ANALYSIS OF DIAGNOSTIC ACCURACY OF WHOLE-BODY 18F-FDG PET AND 18F-FDG PET/CT IN DETECTING OCCULT MALIGNANCY IN PATIENTS WITH IDIOPATHIC INFLAMMATORY MYOPATHY

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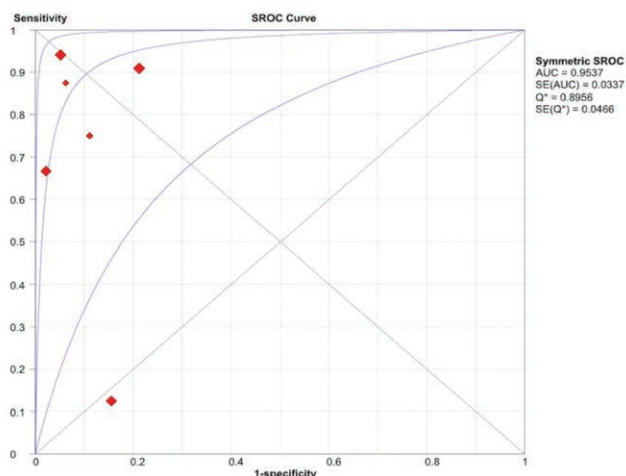
**Background:** Idiopathic inflammatory myopathies (IIMs) are chronic, systemic autoimmune diseases that can cause muscle inflammation, weakness, and skin manifestations. Several studies have confirmed the association between IIMs and malignancy in adult population with varied frequency (4-42%), highest in patients with dermatomyositis. Detecting occult malignancy is a diagnostic challenge involving cost- and time-consuming methods. The (18F) fluorodeoxyglucose positron emission tomography ((18F) FDG-PET) role in this context has been studied in multiple studies.

**Objectives:** The purpose of this study is to assess the diagnostic performance of whole-body 18F-FDG PET or 18F-FDG PET/CT for detection of occult malignancy in patients with IIMs.

**Methods:** A systematic search was performed in PubMed (Medline), Embase, and Scopus, Cochrane and clinicaltrials.gov to identify relevant published studies reporting the performance of 18F-FDG PET or 18F-FDG PET/CT in detecting occult malignancy in IIMs. Histopathologic confirmation and/or clinical follow-up was considered as the gold standard for diagnosis. Studies were eligible if all patients were 18 years or older, does not have history or current diagnosis of cancer and classified as IIMs according to Bohan and Peter classification criteria or have confirmed tissue diagnosis. The screening, full text review, quality assessment with QUADAS-2 tool and data extraction were performed by two investigators. Pooled estimates, with 95% confidence intervals (CIs), of sensitivity, specificity, and diagnostic odds ratio were calculated. A summary receiver-operating-characteristic curve (SROC) was constructed, and the area under the curve (AUC) was determined along with the Q\* index.

**Results:** Out of 499 studies collected, six studies including a total of 293 patients with IIMs and who underwent 18F-FDG PET or 18F-FDG PET/CT examinations met our inclusion criteria. In two studies (87 participants), there was no clear data about the age and gender of the participants. The other four studies (total of 206 patients) 131/206 were females and 75/206 were males. Information about the type of IIMs was available in 5/6 studies with total of 283 participants; Dermatomyositis (194/283), Overlap polymyositis (41/283), Immune mediated necrotizing myositis (14/283), Polymyositis (11/283), non-specific (4/283), and orbital myositis (1/283). A total of 47 cancers were detected with lung (9/47), Breast (8/47) and nasopharyngeal (6/47) cancers were the most reported malignancies. Interestingly, all the breast cancers were reported as false negative. The pooled sensitivity, specificity, and diagnostic odds ratio of 18F-FDG PET or 18F-FDG PET/CT for the detection of underlying malignancy were 0.81 (95% CI, 0.67–0.91), 0.89 (95% CI, 0.84–0.92), and 38.19 (95% CI, 7.6–190.60), respectively. The heterogeneity of the studies was moderate with Chi-square, and I<sup>2</sup>

index of 15.6 (P <0.05) and 68% respectively. The AUC and the Q\* index was 0.95(SE, 0.033) and 0.89, indicating excellent diagnostic accuracy (Figure 1).



**Figure 1.** Summary Receiver Operating Characteristic curve of PET scan in detecting occult malignancy in IIMs

**Conclusion:** This meta-analysis demonstrates that whole-body 18F-FDG PET or 18F-FDG PET/CT has high diagnostic accuracy and moderate to high sensitivity and specificity for detection of underlying malignancy in patients diagnosed with IIMs.

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POS0898

#### SURGICAL MANAGEMENT OF DIGITAL ULCERS IN SYSTEMIC SCLEROSIS: A SYSTEMATIC LITERATURE REVIEW.

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