**Covering letter**

The Scientific Committee,

Second IAMRS Conference.

Submission of Abstract for the Conference

Dear Sirs,

We intend to present the attached article entitled **“ Role of Nuclear Medicine in the Management of Orthopaedic prostheses complications ”** in your Second IAMRS Conference. On behalf of all contributors, I will act as the corresponding author from this point onward. We have no conflict of interest in any substance or material mentioned in this manuscript.

Yours sincerely,

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**Abstract**

Hip and knee replacements are two of the most frequent orthopedic procedures, despite technical and prosthetic design advances, complications after placement of a hip prosthesis are relatively common. The incidence of total joint replacement failures is relatively low. Failure is established when revision or removal of the prosthesis is necessary because of the patient's symptoms, especially pain. After hip or knee replacement, between 10% and 25% of patients experience discomfort within 5 years. This can be due to one of the complications that may follow placement of the prosthesis: loosening, infection, stem fatigue fracture, cement fracture, trochanteric osteotomy displacement, and heterotopic bone formation. The most common complication is loosening, with or without infection.

Nuclear Medicine had incrementally unreplaceable role in the differentiation between prosthetic join loosening and infection. And this can be achieved by using different radiotracers and imaging modalities like SPECT-CT and PET-CT.