

## Comparison of Indium-111-labeled leukocyte scintigraphy and Technetium-99m joint scintigraphy in rheumatoid arthritis and osteoarthritis

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This study was undertaken to evaluate the use of Indium-111-labeled leukocyte ( $^{111}\text{In-WBC}$ ) imaging compared with Technetium-99m pertechnetate ( $^{99\text{m}}\text{TcO}_4^-$ ) imaging in 19 patients with rheumatoid arthritis (RA) and 8 with osteoarthritis. Knee and wrist joints were evaluated for both radionuclides. The results indicated a good correlation of the clinical assessment of pain and swelling with joint uptake ratio (JUR) between  $^{111}\text{In-WBC}$  and  $^{99\text{m}}\text{TcO}_4^-$  in RA and osteoarthritis patients. We observed a discrepancy in both imagings in "burned out" cases. It was concluded that a JUR of  $^{111}\text{In-WBC}$  could distinguish active RA from inactive RA or osteoarthritis at a value of 1.15 and that the use of  $^{111}\text{In-WBC}$  was a more reliable procedure than  $^{99\text{m}}\text{TcO}_4^-$ .

**Key words:** Indium-111-labeled leukocyte, Technetium-99m pertechnetate, rheumatoid arthritis, osteoarthritis, comparative studies