The tissue distribution of simultaneously injected In-111 oxine leukocytes and Ga-67 citrate were studied using 3 rabbits with turpentine induced abscesses in their legs. Rabbits were sacrificed at 72 hours after the administration of radiopharmaceuticals and the radioactivity of each tissue was counted by a germanium semiconductor detector. In-111 oxine leukocytes showed the same absorb to-muscle ratio of Ga-67 citrate. Thirty four patients suspected of having inflammatory lesions in the abdominal and intra-abdominal areas were studied with In-111 oxine labeled autologous leukocytes. Of them, focal accumulations were observed in 9 patients and they were proved as abscesses by surgeries or other diagnostic procedures. Of 15 patients studied with both methods of Ga-67 citrate and In-111 oxine leukocytes, 8 were proved of having abscesses. Two of 5 confirmed abscesses were not detectable by In-111 oxine leukocytes. They were both graviation abscesses. In the remaining 6 patients, positive accumulation of radioactivity in the abscesses was evident. The In-111 oxine leukocytes seem to be useful for the detection of focal inflammatory lesions particularly in the abdominal and intra-pelvic areas as well as in soft tissues.