Radioimmunodetection has been shown to be an invaluable method in the diagnosis of primary and metastatic malignant disease. Fourteen patients, consisting of four men and 10 women with clinical suspicion of metastatic malignant melanoma or ocular melanoma were prospectively evaluated with the technique. Ten (71%) had positive and four (29%) had negative scintigrams. There was one false positive scintigram. The overall sensitivity and specificity were 100% and 80%. respectively. SPET was necessary for the radioimmunodetection of patients with ocular melanoma. Combined immunoscintigraphv and immune-lymphoscintigraphy enhanced the diagnosis of small, cutaneous melanoma and metastatic lymph node disease.