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Monitoring of metastatic bone tumor using by near-infrared fluorometric imaging system on mouse xenograft model

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Tumors of the prostate or breast are particularly likely to metastasize to the bone, and early diagnosis of metastatic bone tumors is important for designing an effective treatment strategy. Imaging modalities for the detection of bone metastasis are limited, and radiation-based techniques are commonly used. Here, we investigated the efficacy of selective near-infrared (NIR) fluorescence detection of metastatic bone tumors and its role in the detection of bone metastasis in prostate and breast cancer cell lines and in a xenograft mouse model. A targeted NIR fluorophore was used to monitor metastatic bone tumors using a NIR fluorescence imaging system in real time, enabling the diagnosis of bone metastasis in vivo by providing the location of the metastatic bone tumor. The NIR fluorescence imaging technique using targeted NIR contrast agents is a potential tool for the early diagnosis of bone tumors.

Biography

Wonbong Lim has completed his PhD from Department of Oral Pathology at Chonnam National University in South Korea and Postdoctoral studies from same place. He is the Assistant Professor in Department of Premedical Science, College of Medicine, Chosun University and Director of research lab at Department of Orthopaedic Surgery in Chosun University Hospital. He has published more than 50 papers in reputed journals including Bone Biology and Carcinogenesis.

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