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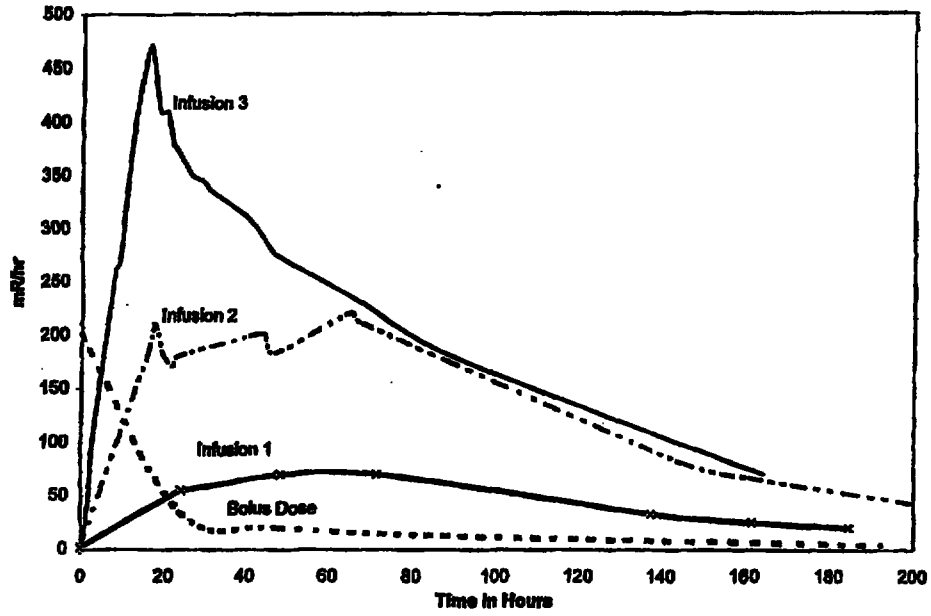
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(54) Title: METHOD TO ENHANCE TISSUE ACCUMULATION OF RADIOLABELED COMPOUNDS




(57) Abstract

Administration of a radioisotopic compound by infusion over a period of time greater than two hours, preferably greater than twelve hours, greatly increases the maximum radioactivity that accumulates in the target cell. The efficacy of the administration of the radiolabeled compound can be increased about five times higher than prior bolus injection or short infusion methods. This method enhances the tumor to background ratio by increasing the actual radioligand accumulated inside the tumor cells. This technique works for any radiolabeled compound whose cellular uptake is limited by a cellular process of either binding to a cellular receptor or to a transport protein. Once the radiolabeled compound is bound and internalized, the ability of an unlabeled compound to compete with the radioligand is markedly decreased. The primary factor governing residence time after internalization is the physical half–life of the radioisotope, not biologic half–life.