

CLINICAL TRIAL: TREATMENT OF LUNG AND LIVER CANCER WITH 188RE-IMDENDRIM

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Résumé : ImDendrim treatment in solid tumor patients is highly targeted, good safety and efficacy. Indicating it hold great potential as liquid brachytherapy device candidate for solid tumors therapy.

Mots-clés: ImDendrim, solid Tumor, 188Re, CT

I- Introduction :

There are many therapeutic modalities for the tumoral treatment, but there is still no particularly effective treatment for non-operable solid tumors, particularly those of the lung and liver. In the recent past, the application of radionuclide therapy in the treatment of solid tumors has garnered increasing interest and has emerged as a novel therapeutic approach for cancer. This study aims to assess the safety, distribution, and therapeutic efficacy of ImDendrim in the management of solid tumors.

II- Matériels et méthode:

ImDendrim was administered to 36 selected patients with liver cancer (n=16) and lung cancer (n=20) by percutaneous intratumoral injection with doses 10cm² and 20cm². The distribution of ImDendrim and its therapeutic effect were studied using SPECT/CT. The safety of ImDendrim was retrospectively evaluated.

III- Résultats et discussion:

Our study demonstrated that ImDendrim treatment in solid tumor patients is highly targeted, good safety and efficacy. The nitroimidazole in ImDendrim is designed to target hypoxic tumour cells, while the β -rays emitted by 188Re are employed to kill tumours. Furthermore, the γ -rays of 188Re facilitate the integration of diagnosis and treatment.

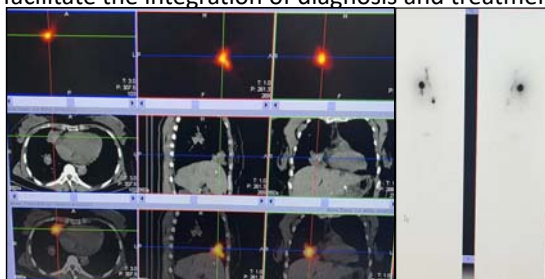


Figure 2: The biodistribution of imDendrim was imaged using SPECT with γ rays emitted by 188Re.

Urine within 24 hours						Total
urine volume	0(base line)	1mL	2 mL	5 mL	10 mL	2210 mL
Activity (μ Ci)	210	219	227	251	287	17680
count	173	1141	1981	4333	6900	1.68X10 ⁶

Urine within 48 hours						Total
urine volume	0(base line)	1mL	2 mL	5 mL	10 mL	2210 mL
Activity (μ Ci)	49	49	49	50	52	263
count	87	101	115	230	378	51876

Figure 3: Urine monitoring

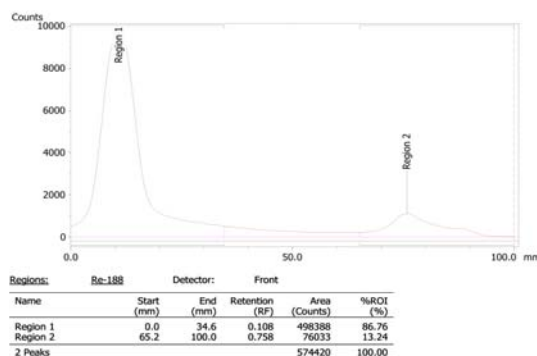
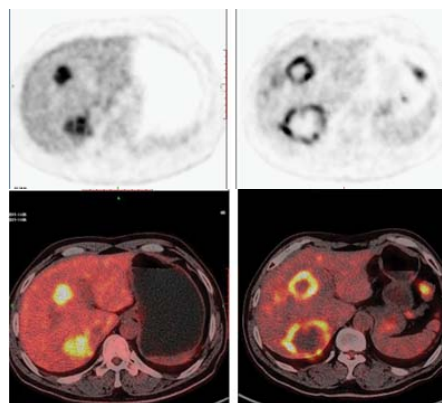


Figure 1: ImDendrim Radiochemical Purity



Before treatment **After treatment**

Conclusion: Indicating ImDendrim hold great potential as liquid brachytherapy device candidate for solid tumors therapy.