

全身性放射性同位素藥物治療的最新進展  
Systemic therapy using radiopharmaceuticals

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Radiopharmaceutical therapy (RPT) is an emerging therapy that deliver radioactive atoms to cancer-associated targets to treat many types of cancer. The prototypical example of systemic RPT is [<sup>131</sup>I]NaI (radioiodine) for treatment of thyroid cancer since 1949. In recent 10 years, many pivotal studies demonstrated the efficacy of RPT in multiple types of cancer: castration-resistant prostate cancer (Radium-223 chloride, <sup>177</sup>Lu-PSMA-617), mid-gut neuroendocrine tumor (<sup>177</sup>Lu-Dotatate), pheochromocytoma or paraganglioma ([<sup>131</sup>I]MIBG). With the recent US FDA approval of these 4 new RPTs, the potential of this treatment is now being recognized. In addition, the toxicity of RPT is usually minimal to modest. In this lecture, I will review the major advance of RPT in past decade and discuss about RPT in the future.