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Carbon ion therapy facility at Taipei Veterans General Hospital

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Carbon ion therapy is gaining popularity due to its unique physical and radiobiological properties, such as a lower oxygen enhancement ratio (OER) than photon and proton therapy, indicating that efficacy is not limited by hypoxic tumor microenvironments. It also has a superior anticancer effect on hypoxic tumor cells, which are resistant to chemotherapy, radiotherapy, and immunotherapy. It is thus used to treat a wide range of cancers and increasingly being used to treat recurrent disease. TVGH is a national medical facility committed to protecting public health and upholding the highest medical standards. Given that cancer is Taiwan's leading cause of death, accounting for one-third of our hospitalized patients, we have spent decades researching and implementing cutting-edge anticancer treatments. As well as to complete the anticancer treatment spectrum in Taiwan, TVGH has established a carbon ion therapy facility of synchrotron accelerator type. Its construction began in 2019 and was completed in a record-breaking 15 months. After twenty months of equipment installation and verification, TVGH became the world's fourteenth and Taiwan's only carbon ion therapy facility. Since the opening of this carbon ion therapy facility in May 2023, TVGH has treated nearly 200 patients, more than 90% of whom have pancreatic, prostate, liver, or lung cancer. Although TVGH has only been monitoring these patients for less than one year, numerous favorable results have been observed.

Footnotes

Funding Agency

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