

PROTOM INTERNATIONAL CLINICAL EFFICACY SITE

PROTON THERAPY LITERATURE

In the treatment of cancer, high doses of radiation are used to destroy cancer cells by damaging their DNA. When the DNA of a cancer cell is destroyed beyond repair, the cell dies and is then eliminated by the body through natural processes.

Proton therapy is an advanced form of radiation treatment that has been used to treat more than 170,000 people worldwide. By 2030, it is estimated that between 300,000 and 600,000 patients will have received proton therapy treatment.

The following are research studies published between 2016 and 2022 that underscore the benefits of proton therapy for certain cancer patients. The majority of the studies employ <u>pencil</u> <u>beam scanning</u>, the most precise form of proton therapy.

PROTON THERAPY (GENERAL)

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BREAST

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Hisashi Yamaguchi, Nobuyoshi Fukumitsu, Haruko Numajiri et al. <u>The Japanese nationwide</u> <u>cohort data of proton beam therapy for liver oligometastasis in breast cancer patients</u>, 25 April 2023, *PREPRINT (Version 1) available at Research Square* [https://doi.org/10.21203/rs.3.rs-2768801/v1]

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Justin E Bekelman, Hien Lu, Stephanie Pugh. et. al. <u>Pragmatic randomised clinical trial of</u> <u>proton versus photon therapy for patients with non-metastatic breast cancer: the Radiotherapy</u> <u>Comparative Effectiveness (RadComp) Consortium trial protocol.</u> *BMJ Open.* 2019; 9(10): e025556.

D. Pasalic, E.A. Strom, P.K. Allen, et, al. <u>Prospectively Assessed Outcomes for Proton</u> <u>Accelerated Partial Breast Irradiation.</u> *Int J Radiat Oncol Biol Phys.* 2019 Sep 1; 105 (1): S193

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