At present, the types of proven treatment for cancer are surgery, radiotherapy, and chemotherapy. Depending on the characteristics of cancer such as nature, size, shape and position, and personal circumstances such as age, sex, general health status and individual preferences for treatment of patient, an optimal therapy tailored to the patient can be chosen and performed in combination with other treatments. When a cancer is localized without metastasis, surgery or radiotherapy, or the two in combination, is chosen, aiming at relieving symptoms and controlling the cancer for as long as possible. The radiotherapies, in which proton beams of accelerated hydrogen nuclei or heavy particle beams of accelerated carbon nuclei are irradiated into cancer cells, are called particle beam therapies. In particle beam therapy, the radiation dose can be effectively focused on the cancer lesion exclusively and side effects of normal tissues can be minimized. In our hospital, proton beam therapy is performed and the specialists in medical physics are engaged in a team approach of medical care to introduce state-of-the-art technologies into our proton beam therapy. This article introduces the advantage and current outcomes of our proton beam therapy.