

**SUZUKI-1: Guidebook for BPA-BNCT: Collaboration work of
Japanese Society of Neutron Capture Therapy
and Japanese Society for Radiation Oncology**

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In Japan, accelerator-based boron neutron capture therapy (BNCT) system for new medical device and boronophenylalanine (BPA)-based new drug for BNCT were approved by the Ministry of Health, Labour and Welfare of Japan for the treatment of locally unresectable recurrent or unresectable advanced head and neck cancer on March 2020. BNCT is classified as a radiation therapy that derives its therapy effects from the heavy-particle beams formed by the reactions between boron (¹⁰B) and thermal neutrons. Prior to this approval, Japanese Society of Neutron Capture Therapy (JSNCT) and Japanese Society for Radiation Oncology (JASTRO) released the "Guidebook for BPA-BNCT" to the public on the homepages of the two societies.

The objective of this guidebook is to provide the content which is describe at this abstract as common knowledge to multidisciplinary medical personnel (e.g., physicians, radiologists, medical physicists, nurses, and pharmacists) who will be conducting future clinical research using accelerator BNCT, which will be introduced in medical institutions. Furthermore, it will ensure safe implementation of accelerator BNCT and provide avenues for novel clinical research. The publication of this guidebook is particularly important, considering that there are practically no medical personnel in Japan with experience in dealing with neutrons. The content of the guidebook is as follows:

1. Introduction,
2. Neutron Irradiation System
3. Dose Evaluation / Treatment Planning
4. Quality Control
5. Acceptance test / Commissioning
6. Drugs
7. BNCT Procedure
8. BNCT Clinical Research
9. Requirements for BNCT Practitioners