

Department of Internal Medicine

Division of Clinical Oncology/Hematology

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General Summary

The immediate goals of our clinical and basic research are to investigate basic and clinical aspects of malignant diseases and to try to improve outcomes for patients with hematological malignancies and solid tumors, leading to the ultimate goals of improving the natural history of malignant diseases. We have also been performing several clinical trials and basic research studies successfully throughout 2019.

Research Activities

Leukemias

Many patients with previously untreated hematological disorders have been referred to our department. The patients treated in 2019 included 24 patients with acute myeloid leukemia or acute lymphoblastic leukemia and 2 patients with chronic myeloid leukemia. We have performed clinical trials as a member of the Japan Adult Leukemia Study Group, which is a distinguished group established in 1987 in Japan for clinical research and the treatment of such disorders. We have investigated gene analysis of leukemia cells to understand biological mechanisms of leukemia. A number of molecular directed treatment options have recently emerged and have made comprehensive diagnostics an important pillar of clinical decision-making.

Lymphomas

Lymphomas are a heterogeneous group of lymphoproliferative malignancies with differing patterns of behavior and responses to treatment. In 2019 we registered 102 patients with newly diagnosed cases of non-Hodgkin's lymphoma. We have performed clinical trials as a member of the Lymphoma Study Group of the Japan Clinical Oncology Group (JCOG). The study JCOG0601 (newly diagnosed low-risk advanced diffuse large B-cell lymphoma: phase II/III) was a pivotal protocol study beginning in 2007.

Myeloma

In the last 20 years, many new therapeutic agents for multiple myeloma (MM) have been introduced. We registered 11 patients with newly diagnosed MM in 2019. Numerous agents, which range from immunomodulatory drugs and proteasome inhibitors to monoclonal antibodies, have now been integrated into both induction and salvage regimens and

have dramatically revolutionized the treatment landscape of MM. We have participated in multi-institutional research studies to develop optimal chemotherapy for patients with newly diagnosed MM or relapsed/refractory MM.

Hematopoietic stem cell transplantation

Hematopoietic cell transplantation (HCT) is a well-established treatment to control many malignant and nonmalignant diseases involving the hematopoietic system and tumors. To investigate and establish safer and more effective methods of HCT, we have performed serial clinical studies examining umbilical cord blood transplantation, reduced-intensity stem cell transplantation from haploidentical donors, and an investigation of the mechanisms of graft-versus-host disease. We have participated in multi-institutional research studies and published many articles about HCT.

Solid tumors

Esophageal cancer

Esophageal cancer is the 14th most prevalent cancer in Japan. The incidence of esophageal cancer is rapidly increasing, and the overall 5-year survival rate ranges from 15% to 25%, with the best outcomes expected for esophageal cancer diagnosed at an early stage. Since 2008 we have been investigating a combined chemotherapy with docetaxel, cisplatin, and 24 hours' continuous infusion of fluorouracil (5-FU) (the DCF regimen) for patients with advanced esophageal cancer.

Breast cancer

Breast cancer is the most frequently diagnosed cancer in women and the 4th most prevalent cancer in Japan. The most important risk factors for breast cancer include age, genetic predisposition, exposure to estrogens, low parity, a Western style diet, obesity, and alcohol consumption. The choice of treatment strategy is based on the tumor's burden, location, and biology and on the patient's menopausal status, general health status, and preferences. Our clinical analysis of long-term outcomes in cases of a particular oligometastatic breast cancer showed that this cancer reflects a distinct subgroup with long-term prognosis superior to that of metastatic breast cancer, with a reasonable probability of clinical cure.

Pancreatic cancer

Pancreatic cancer remains a leading cancer-related cause of death worldwide and is generally characterized by a dismal prognosis and limited potential for oncologic treatment. The 5-year overall survival rate has increased over the past decade from 5% to 9%. This increased survival was achieved mainly through recent improvements in neoadjuvant and adjuvant therapeutic strategies and perioperative care. However, therapeutic options are still limited, and the tumor often develops resistance to current treatments. We have investigated combination chemotherapies with both neoadjuvant and adjuvant settings to improve the prognosis of pancreatic cancer.

Genomic medicine

From June 2019, 2 different cancer genome profiling test panels (OncoGuide NCC Onco-panel and FoundationOne CDx) were chosen to be covered by the National Insurance System in Japan. To run the precision medicine based on cancer gene panels, the Ministry of Health, Labour and Welfare of Japan assigned 11 certified core hospitals for genomic medicine. The Jikei University Hospital has been one of the sub-core hospitals. We have collected genomic and clinical data from patients with cancer and participated in expert panels with medical oncologists, pathologists, genomic counselors, and bioinformaticians.

Publications

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