

or from the transformation of indolent lymphomas. The technique of gene signature from the DNA arrangement in the matrix identifies two distinct forms of DLBCL – one that expresses genes characteristic of the germinal center (GC) cells and another, which expresses genes which are normally induced during in vitro and in vivo activation of B-Cells. Many of these genes codify proteins which play a role in the transcription factors and thus control the tumor transformation and response to the chemotherapy program. The immunohistochemical expression of these proteins is variable within the subgroups identified by the gene signature. Tissue microarrays (TM) appear to be particularly useful for immunohistochemical characterization of lymphomas and facilitate comprehensive molecular characterization of a large number of tumours at a time.

Objective: To determine the GC and non-germinal center (NGC) subgroups in accordance with the immunohistochemical expression of CD10, BCL-6 and MUM1 and to evaluate the overall survival (OS).

Cases and Methods: Seventy four untreated pts (median age: 59 yrs: 39M/35F) with DLBCL de novo lymphoma, 51.2% male/48.8% female, median age of 59 years, median follow-up time of 16 months and average of 27.5 months, with 63% presenting nodal disease. In order to facilitate the immunohistochemical study, tissue microarrays were utilized. Antibodies used for immunohistochemistry stains: CD10 (clone 56C6; Novocastra; NCL-CD10-270), BCL-6 (clone GI 191E/A8; Cell Mark; CMC 798) and MUM1 (clone MUM1p; Dako, CA; M7259)

Results: The cases were comprised of 36% DLBCL-CG and 64% DLBCL-NGC, the group GCB was associated with a significantly longer OS ($p = 0.003$).

Conclusions: TM method is useful for immunophenotyping and clinic pathological analyses and it makes diagnosis less labor-intensive at lower cost. The algorithm based on the expression of CD10, BCL-6 and MUM1 identified subgroups with different prognoses.

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POSTER

Treatment outcome in patients with advanced-stage Hodgkin's lymphoma after developing drug intolerance to components of ABVD or BEACOPP regimens

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Purpose: Doxorubicin-associated cardiac symptoms and bleomycin-induced pulmonary toxicity as well as hypersensitivity reaction to etoposide, are important side-effects of ABVD or BEACOPP chemotherapy regimens used in patients with advanced Hodgkin's lymphoma (HL). Omission of a particular drug from subsequent chemotherapy or proceeding with another regimen are most common approaches to complete HL therapy. The aim of the study was to estimate the impact of different drugs discontinuation on the outcome in this cohort of HL patients. Patients and Methods: Between 1998 and 2004, 120 pts with advanced HL were enrolled for receiving 6–8 courses of ABVD- or BEACOPP-based chemotherapy followed by radiotherapy on bulky or residual sites. BEACOPP (baseline) was prescribed only to the patients with any of 3 adverse characteristics: (1) lymphoid depletion histology, (2) pericardial effusion, (3) involvement of bones or bone marrow combined with massive splenic lesions. Overall (OS) and relapse-free survival (RFS) in groups of patients, who had doxorubicin, or bleomycin, or etoposide omitted from their regimen, were compared with those ones after full course therapy.

Results: In ABVD group ($n = 65$), doxorubicin or bleomycin discontinuation was necessary, respectively, in 6.2% and 8% patients. In BEACOPP group ($n = 55$), etoposide or bleomycin were withdrawn in 5.4% and 9% cases, respectively. The median follow-up was 4 years. The omission of bleomycin had no impact on OS and RFS in the relevant treatment groups. Discontinuation of doxorubicin resulted in 3-year RFS of $50 \pm 25\%$, compared to $89 \pm 4.7\%$ in the main ABVD group ($P = 0.109$); OS was, respectively, 100% and $95 \pm 3\%$. All three patients who had been treated without etoposide, developed relapses and died of HL after 9, 21 and 42 months; OS and RFS in the main BEACOPP group was, respectively, $92 \pm 4\%$ and $86 \pm 5\%$ ($P = 0.000$, log-rank test).

Conclusions: Despite the relatively rare occurrence of etoposide intolerance, our data on this small cohort show important role of this drug for favorable OS and RFS after BEACOPP-based treatment. The use of doxorubicin seems to be important for acceptable RFS after ABVD. The crucial point may be an early discontinuation of etoposide and doxorubicin. On the contrary, bleomycin pulmonary toxicity is dependent on cumulative dose and, as a rule, it is registered after 4 to 6 courses when bleomycin may be safely omitted.

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POSTER

Toxicity and Response rates to Imatinib in chronic myeloid leukemia with variant translocation – An experience from south India

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Background: The scenario of Chronic myeloid leukemia is changed considerable with the introduction of the novel Bcr-Abl tyrosine kinase inhibitor; Imatinib. Currently we can achieve nearly 100% complete hematological remission, upto 85% cytogenetic remission and 45% of molecular remission with Imatinib in classical t(9:22) translocations. We wanted to evaluate whether we can achieve the same results in variant translocations.

Methods: It is a non randomized, prospective study conducted at a tertiary care cancer center with an approximate attendance of 15,000 new cases. The patients were stratified into those with classical translocation and those with variant translocation. Hematological assessment was done every monthly, Cytogenetics (conventional) every 3 monthly and molecular assessment (PCR for Bcr-Abl) every 6 monthly. CTC version 3.0 was used to assess the toxicity. Differences in the proportions were calculated with the help of Medcalc Version 7.5.

Results: A total of 314 patients with CML were evaluated who were on regular treatment with Imatinib. Out of them 24 patients had variant translocation. The response rates in two groups are listed in the table.

Conclusion: Our findings suggest that CML patients with variant translocations had slow and poorer response to Imatinib, compared to those having classical translocation. The toxicity rates are comparable in both groups.

Response rates and toxicity to imatinib

	Classical (n = 289)	Variant (n = 25)
Mean age	42.6 ± 12.2	41.6 ± 14.9
Percentage of patients in		
chronic phase	86%	80%
accelerated phase	12%	16%
blast crisis	2%	4%
Hematological response		
complete	96%	80%
no response	4%	20%
Cytogenetic response (n = 184)	62%	48%
Molecular response ^a (n = 99)	42%	32%
Grade II/IV toxicity	25%	32%

^aReduction of BCR-ABL.

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POSTER

Primary follicular lymphoma of the gastrointestinal tract; initial sites and the promise of the rituximab plus CHOP chemotherapy

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Background and Aims: Little is known about the frequency, clinicopathologic characteristics, prognosis, and treatment of primary follicular lymphoma of the gastrointestinal tract (PFLGI). We examined the clinicopathologic characteristics of PFLGI and the potential benefit of the treatment with rituximab plus CHOP chemotherapy (R-CHOP).

Methods: Fourteen patients with PFLGI (10 men and 4 women; mean age, 57.9 years) who visited Hiroshima University Hospital between January 2001 and December 2006 were enrolled in this study. We performed double-balloon enteroscopy (DBE) in 12 PFLGI patients to examine the entire small bowel. Five patients were treated with R-CHOP and evaluated for response after completing treatment.

Results: The frequency of PFLGI was especially high in recent years. PFLGI accounted for 19.6% of primary GI non-Hodgkin's lymphoma from 2005 to 2006, whereas it accounted for only 4.1% from 2001 to 2004. DBE showed new lesions in the third portion of duodenum, jejunum, or ileum in 10 of these 12 patients (83.3%). The endoscopic finding was nodularity of