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Survival patterns in follicular lymphoma patients have improved over past 20 years

NEW ORLEANS—Long-term follow-up of follicular lymphoma, which comprises about 17% of NHL, has been reported by single- and multiinstitution groups. In a general poster session at the 40th annual meeting of ASCO, he presented the analyses of survival of follicular lymphoma patients based on data from the Surveillance, Epidemiology, and End Results (SEER) program of the National Cancer Institute. From the SEER program, 12,008 patients with follicular lymphoma were identified by diagnostic codes. Relative survival rates were determined based on mortality rates for the same age and sex US population. Survival probabilities were calculated accounting for diagnosis dates (1983-1989, 1990-99), age at diagnosis, gender, race, and tumor grade at diagnosis (see table). These studies indicate that the survival of US patients with follicular lymphoma has improved over the past 20 years. Dr Swenson said: Improvement was not seen in all subgroups and is indicative of changes in the general US population. “We speculate that the survival improvement may be due to the concurrent and/or sequential application of effective therapies and aggressive supportive care rather than a single therapeutic agent,” said Dr Swenson.

Survival patterns in follicular lymphoma patients over the past 20 years

<table>
<thead>
<tr>
<th>Follicular lymphoma</th>
<th>Median survival months (number of patients)</th>
<th>Adjusted death hazard ratio between 2 time spans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>84 (4527)</td>
<td>93 (7701)</td>
</tr>
<tr>
<td>Over 60</td>
<td>61 (2562)</td>
<td>67 (4559)</td>
</tr>
<tr>
<td>Advanced Stage</td>
<td>63 (1090)</td>
<td>72 (3659)</td>
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Continued on page 2
New Orleans—In a study of 24 patients with advanced cancers and mutated p53, vaccination with specific mutated p53 peptides elicited immune responses, reported Ramy A. Ibrahim, MD, from the Fred Hutchinson Cancer Center, Seattle, Washington, in a poster discussion on Developmental Therapeutics. Immunotherapy. At ASCO, peripheral blood mononuclear cells (PBMC) from the patients were cultured with the p53 peptide and granulocyte-macrophage stimulating factor for 48 hours. These were then administered to the patients intravenously. Subsequent administrations of PBMC were cultured with p53 peptide and the same protocol was employed, along with 6 MIU/day of IL-2 on days 15-19 and days 22-26. The progression-free survival in 20 evaluable patients was twice the progression-free survival of patients treated with a control peptide. “Three patients are still alive after 40 months compared to conventional treatment,” said Dr Ibrahim, “and overall survival is statistically significant.” This novel technology provides promising treatment for immunologically deficient patients.

Cytokines enhance immune responses in follicular lymphoma

New Orleans—CD20 antibody positive CD8 cells were shown to kill tumor in follicular lymphoma, reported Eric Chen, MD, from the Fred Hutchinson Cancer Center, Seattle, Washington, in a poster discussion on Immunotherapy. Developmental Therapeutics. Immunotherapy. In a study of 34 patients with advanced follicular lymphoma, the cells were electroporated with an anti-CD20 chimeric T-cell receptor plasmid and cultured using interleukin-2. The cells were grown in an antibody-containing medium to select for cells carrying the introduced plasmid. CD8 positive cells were selected using immunomagnetic bead technology and the clones were confirmed by flow cytometry. These cells were used in vitro and in vivo to examine natural killer cell activity. Dr Chen and his colleagues concluded that this method proves that CD20 positive T-cells are effective in vitro and in vivo, and a phase I trial is planned in patients relapsed follicular lymphoma. “The use of CD8 positive T-cell selection prior to treatment with CD28 antibody provides a growth advantage to these T-cells,” Dr Chen said. “IL-15 was also studied in the culture medium and proved to give greater growth advantage over IL-2.”

In another poster presentation, Ian Davis, MD, from the Ludwig Institute for Cancer Research, Melbourne, Australia, reported that interleukin-2 incubated autologous CD8 T-cells have significantly increased expression of all T-cell activating receptors and IFN-γ production when compared to CD8 T-cells cultured with IL-2 alone. “This supports the idea that interleukin-2 incubated CD8 T-cells have a more significant activation than IL-2 alone,” Dr Davis said.

Clinical responses, continued

Stanford, California, also presented data on the clinical importance of p53 vaccination for follicular lymphoma, reported Eric Chen, MD, from the Fred Hutchinson Cancer Center, Seattle, Washington, in a poster discussion on Immunotherapy. Developmental Therapeutics. Immunotherapy. In a study of 24 patients with advanced cancers and mutated p53, vaccination with specific mutated p53 peptides elicited immune responses, reported Ramy A. Ibrahim, MD, from the Fred Hutchinson Cancer Center, Seattle, Washington, in a poster discussion on Developmental Therapeutics. Immunotherapy. At ASCO, peripheral blood mononuclear cells (PBMC) from the patients were cultured with the p53 peptide and granulocyte-macrophage stimulating factor for 48 hours. These were then administered to the patients intravenously. Subsequent administrations of PBMC were cultured with p53 peptide and the same protocol was employed, along with 6 MIU/day of IL-2 on days 15-19 and days 22-26. The progression-free survival in 20 evaluable patients was twice the progression-free survival of patients treated with a control peptide. “Three patients are still alive after 40 months compared to conventional treatment,” said Dr Ibrahim, “and overall survival is statistically significant.” This novel technology provides promising treatment for immunologically deficient patients.

Effect of BCL-2 and BCL-6 on prognosis in non-Hodgkin's lymphoma patients

New Orleans—Pierre Morel, MD, from the Hôpital Schaffner, Lens, France, presented data on the special session on an interim analysis of the GELA group on autologous stem cell transplantation (ASCT) as compared to conventional chemotherapy and its potential impact on the use of stem cell transplantation. The investigators observed that 27% of p53 patients aged 18-59 years stratified according to BCL-2 expression are suitable for stem cell transplantation whereas only 14% of patients with wild-type p53 are suitable for ASCT. Dr Morel added, “It may be necessary to carry out molecular profiling by DNA microarray technology to identify patients who are not suitable for ASCT.”

In another presentation, Kenneth S. Wilson, MD, from the British Columbia Cancer Agency, Vancouver, Canada, discussed the study on the GELA group on autologous stem cell transplantation (ASCT) as compared to conventional chemotherapy and its potential impact on the use of stem cell transplantation. The investigators observed that 27% of p53 patients aged 18-59 years stratified according to BCL-2 expression are suitable for stem cell transplantation whereas only 14% of patients with wild-type p53 are suitable for ASCT. Dr Morel added, “It may be necessary to carry out molecular profiling by DNA microarray technology to identify patients who are not suitable for ASCT.”

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