Special lecture
The General Rules for the Clinical and Pathological Study of Primary Liver Cancer defined by Liver Cancer Study Group of Japan

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Liver Cancer Study Group of Japan was founded at 1967 by Surgeons of Kyoto University, Tokyo University and Hokkaidou University. Up to 1973 this group was not well organized at preliminary and immature style. In 1974, Honjo I of Chairman and Professor at 1st Department of Surgery, Kyoto University organized this Cancer Study Group with 10 active members of Internal medicine, pathology as well as surgeons.

Liver Cancer Study Group of Japan are currently composed of 2300 members which includes about 60 executive members, from which a board of directors(9 persons) and a president are elected at every two years and every year, respectively. The important activities are to hold an annual meeting, to make and revise a general rule for primary liver cancer, and to conduct a nationwide survey every two years and publish the reports in each survey.

In this symposium, I will talk about The General Rules for the Clinical and Pathological Study of Primary Liver Cancer defined by Liver Cancer Study Group of Japan.

The General Rules is now 4th Edition which has just been published at November, 2000, after active discussion in the subcommittee. 3rd edition was published at 1992, and is adopted in UICC TNM classification.

According to 4th Edition, I introduce our rules in relation to the points revised this time.

1. Anatomy

1) Main lobar fissure between right and left lobes is called Rex-Cantlie line(3rd Edition; Cantlie line). The most important revision is to adopt Couinaud segment.

2) The grouping of regional lymphnode is deleted. (In 3rd Edition, classified into 3 groups)
1) small nodular type with indistinct margin
2) single nodular type
3) single nodular type with extranodular growth
4) confluent multinodular type
5) infiltrative type

Fig. 1. Macroscopic types.

2. Macroscopic Types of HCC (Fig. 1)

Macroscopic type is classified into 5; small nodular type with indistinct margin, single nodular type, single nodular type with extranodular growth, confluent multinodular type, infiltrative type.

3. Surgical Findings

1) A grade of portal and bile duct involvement is classified into 4 (Vp0-Vp4 and B0-B4) (3rd Ed. 3 grades) Vp4 and B4 mean that tumor involves main portal trunk and common hepatic duct, respectively. In 3rd Edition involvement of either right (left) portal vein or portal trunk was expressed Vp3.

2) Invasion of the Surgical Margin
In the 3rd Edition, negative surgical margin implied that distance from the tumor edge to the cut surface was over 10mm. This was called TW(−). In the 4th Edition, negative surgical margin means that tumor is not exposed to the cut surface, and this is called SM(−). Abbreviation is also changed from TW to SM as above.

4. Tumor Stage (Fig. 2, Table1)

This is one of the most important revisions. The stage is comprised of 3 factors: tumor size (2cm>, 2cm<), vascular invasion including that of bile duct (absence, presence), tumor number (single, not single). Although this classification is not so different in principle from as that of 3rd Edition, we have made it simple. We confirmed the appropriateness by calcul-
T is determined with 3 factors; tumor size (2cm, 2.5cm, 3cm), tumor number (single, multiple), and vascular invasion (absence, presence). These factors are categorized into 2 grades as described in the parentheses. When we called the former as lower grade and the letter as higher grade, T is determined as follows:
T1; no higher grade, T2; one higher grades, T3; two higher grades,
T4; Three higher grades

Fig. 2. T factor.

<table>
<thead>
<tr>
<th>Stage</th>
<th>T factor</th>
<th>N factor</th>
<th>M factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>T1</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td>Stage II</td>
<td>T2</td>
<td>N0</td>
<td>M0</td>
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<tr>
<td>Stage III</td>
<td>T3</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td>Stage IV A</td>
<td>T4</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T1, T2, T3, T4</td>
<td>N1</td>
<td>M0</td>
</tr>
<tr>
<td>Stage IV B</td>
<td>T1, T2, T3, T4</td>
<td>N0, N1</td>
<td>M1</td>
</tr>
</tbody>
</table>

ating the survival curves derived from the nationwide survey in relation to this new staging.

5. Surgical Curability

In 4th Edition, surgical curability is classified into 4 groups; A, B, and C as described below. A category includes A1 and A2 In 3rd Edition, 4 grades were defined; absolute curative, relative curative, relative noncurative, and absolute noncurative resection.

Curability A; No residual tumors, with a high probability of cure
Curability A1; Stage 1, and SM(−)
Curability A2; 2cm< Tumor size <5cm, Vp0, Vv0, B0, IM0,N0,M0, and SM(−)
Curability B; No residual tumors, but not evaluated as Curability A
Curability C: Definite residual tumors

6. Pathology

We adopted the term of early hepatocellular carcinoma instead of that of early hepatocellular carcinoma of well-differentiated type in 3rd Edition.
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Major Interest: 간의 병리와 간암발생과정