

## Patterns of Care Study

\* , † , ‡ , § ,  
 †† , ¶ , †† , # , \*\* ,  
 § § ,  
 \* , † , \* , \* , ‡ , \* , \* , \*  
 § , § , , , ¶ , ¶ , # , \*\*  
 †† , †† , †† , § § ,

\_\_\_\_\_ :

\_\_\_\_\_ : 1998 1 1999 12 18

\_\_\_\_\_ : 가 45 SPSS v10.0 28 ~ 88 ( : 61) 10 1  
 28 (62%), 17 (38%)  
 (44/45, 98%). AJCC (1997 ) I+II , 28 24 (86%)  
 16 8 (50%) (p=0.002). 40 (89%) 가  
 , 43 (98%) 28 17 ,  
 21 (75%), 6 (35%) 5 (18%), 8  
 (47%) , 2 (7%), 3 (18%)  
 (p=0.20). 가 6MVX-ray  
 86% 2.0 Gy 59% 1.8 Gy  
 70.15 Gy 65.98 Gy,  
 12 90

\_\_\_\_\_ : , Patterns of care,

2003

2003 11 3 2003 12 1

PCS)

. PCS

(Patterns of Care Study;

가 가

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<sup>1)</sup> PCS 1971 18

가 6가

1 PCS 1973 1978 2 PCS가 1999 12 5 1998 1

가 <sup>3)</sup> 2 45

SPSS v10.0  
Student's t-test

가 <sup>4)</sup> (structure)

2002 1. (Table 1)

PCS가 가 45 28

17 28

~ 88 61

PCS 가

가 91% (41/45)가  
40 88% (35/40)

31 가  
87% 40%

2. (Table 2)

가 40 (89%)

ECOG 1

1) 34 (76%)

2) ; 96%, 41%

3) ; 1

4) ;

X- (Computerized T1-2 86%, 53%

Tomography; CT), (Magnetic Resonance  
Imaging; MRI), (Whole body bone sacn), N0 96%, 65%

5)

3. (Table 3)

6) ;

(ECOG),

7) 8)

Table 2. Symptoms and Tumor Characteristics

Συμπτώματα	Glottis n=28	Supraglottis n=17	Total n=45
Ψέε (Αερίε)			
Υστε	28-88	13-13	38-88
Μερίου	0	0	0
85x			
Μερίε	2	1	3
Κερίε	3	3	6
Iopoco πe			
Μερίε	4	1	5
Cπeuf	13	4	17
EX-epoκe	2	10	12
Πυκνωμ	3	3	6
Defies oí epokpuk (bly)			
<10	1	3	4
11-30	3	0	3
31-30	2	3	5
31-40	3	3	6
>41	10	2	12
Υπομeí cουεπυκνωμ			
Μeí	4	0	4
Πeí	2	1	3
EX-πeí	0	11	11
Πυκνωμ	2	2	4
Υπομeí oí epokpuk cουεπυκνωμ			
Μeí	4	0	4
8ocpí	3	1	4
Μoκeίε	4	3	7
Ηερίε	8	8	16
Πυκνωμ	2	2	4
Eπeí μeίeí			
Μοe-εβeíeí	13	10	23
Πeίeíe μeίeíeí	1	1	2
ΗΑβeίeíeí	2	1	3
Eπeíμoυeíeí eπeíeíeíeí	3	3	6
Ηερίeíeí	0	0	0
Eπeíeíeíeí oβeίeíeí	3	3	6

Table 2. Symptoms and Tumor Characteristics

	Glottis n=28	Supraglottis n=17	Total n=45
Symptoms			
Hoarseness	26	14	40
Sore throat	4	6	10
Dyspnea	5	3	8
Lumpsense	2	3	5
Dysphagia	2	2	4
Neck mass	0	4	4
Cough	0	2	2
Histology			
Squamous cell ca	28	16	44
Adenocarcinoma	0	1	1
Differentiation			
Well	11	6	17
Moderate	3	8	11
Unknown	14	3	17
AJCC TNM stage			
I, T1N0	18	2	20
II, T2N0	6	6	12
III, T1N1	0	1	1
T3N0	3	1	4
T3N1	0	1	1
IV, T3N2	1	1	2
T4N0	0	2	2
T4N1	0	1	1
T4N3	0	1	1
Unknown T2Nx	0	1	1

36% (16/45)

4. (Table 4)

27 (60%)

75%,

35%

18%,

47%†

7%, 18%

5. (Table 5)

1,

5,

3

Table 3. Diagnostic Methods (n=45)

Methods	Glottis n=28	Supraglottis n=17	Total n=45
Palpation of neck	28	17	45
Chest X-ray	25	16	41
Esophagography	9	3	12
CT*	24	14	38
Bone scan	10	6	16
Indirect laryngoscopy	28	17	45
Direct laryngoscopy	27	16	43
Fiberscopy	22	12	34
LMS†	9	2	11
Esophagoscopy	2	3	5
Bronchoscopy	2	1	3

\*Computed tomography, †Laser microscopic surgery

2

Table 4. Treatment Modality

Modality	Glottis n=28	Supraglottis n=17	Total n=45
Radiotherapy	21	6	27
Surgery+radiotherapy	5	8	13
Chemotherapy+radiotherapy	2	3	5

6. (Table 6)

32 (71%)

13

†

6MV X-

45

(100%)

(thermoplast)

†

Table5. Type of Surgery

Type	Glottis n=28	Supraglottis n=17	Total n=45
Patial L*	0	1	1
Total L	4	1	5
Total L+LND†	1	2	3
Tracheostomy	1	1	2

\*Laryngectomy, †Lymph node dissection

1 ~ 4  
2  
1.8 ~ 2.1 Gy  
59% 1.8 Gy  
86% 2.0 Gy  
48  
65.98 Gy  
70.15 Gy  
(linac gram)  
6  
1, 2.1  
82%

7. PCS

12 90  
1)  
1998 1 1999 12 2  
18  
2)  
3)  
, TNM  
4)

Table 6. Details of Radiotherapy

	Glottis n=28	Supraglottis n=17	Total n=45
Aim			
Curative	23	9	32
Postoperative	5	8	13
Simulation frequency			
Range (median)	1 ~ 4 (1)	1 ~ 4 (2)	1 ~ 4 (2)
Immobilization (thermoplast)	28	17	45
RTP			
2D system	27	12	39
Manual	1	5	6
Equipment (LINAC*)	28	17	45
Energy (6 MV)	28	17	45
Fractionation			
Conventional	28	17	45
Fraction size (Gy)			
1.8	3	10	13
2.0	24	5	29
2.1	1	2	3
Total dose (Gy)			
Median	66	Curative; 66 Postop; 52.7	66
Treatment period (days)			
Median	47.5	50	48
L-gram frequency			
Range (median)	1 ~ 6 (5)	1 ~ 4 (1)	1 ~ 6 (1)
Completion of planned dose			
Complete	23	14	37
Incomplete	5	3	8
75%	2	2	4
50%	1	0	1
25%	2	1	3

\*Linear accelerator

5)  
6)  
7)  
CT  
8)  
9)

20 : PCS

2001

RTOG score

597 (

60%가

10)

RTOG score

17.9%

75%,

42.9%

35.7%

11)

가

가

12)

(upload)

PCS

<sup>5)</sup> 2001

91,944 997

2D

1.1%

가 923 (93%), 가 74

(7%)

3

가

PCS

가

65

8 : 2

가

가

<sup>6)</sup>

cisplatin

5-FU

가

social (1 1

), moderate (1 1 ~ 2 ), heavy (1 3 ~ 7 ),

unknown

가

5

pharyn-

12

90

oesophagography

MRI

. laryngeal

Patterns of Care Study

tomogram

가

1998 ~ 1999 2

(5.6% vs 31%)가

가

가

가

가

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 Abstract
 

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## Investigation of Study Items for the Patterns of Care Study in the Radiotherapy of Laryngeal Cancer: Preliminary Results

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**Purpose:** In order to develop the national guide-lines for the standardization of radiotherapy we are planning to establish a web-based, on-line data-base system for laryngeal cancer. As a first step this study was performed to accumulate the basic clinical information of laryngeal cancer and to determine the items needed for the data-base system.

**Materials and Methods:** We analyzed the clinical data of patients who were treated under the diagnosis of laryngeal cancer from January 1998 through December 1999 in the South-west area of Korea. Eligibility criteria of the patients are as follows: 18 years or older, currently diagnosed with primary epithelial carcinoma of larynx, and no history of previous treatments for another cancers and the other laryngeal diseases. The items were developed and filled out by radiation oncologists who are members of Korean Southwest Radiation Oncology Group. SPSS v10.0 software was used for statistical analysis.

**Results:** Data of forty-five patients were collected. Age distribution of patients ranged from 28 to 88 years (median, 61). Laryngeal cancer occurred predominantly in males (10 : 1 sex ratio). Twenty-eight patients (62%) had primary cancers in the glottis and 17 (38%) in the supraglottis. Most of them were diagnosed pathologically as squamous cell carcinoma (44/45, 98%). Twenty-four of 28 glottic cancer patients (86%) had AJCC (American Joint Committee on Cancer) stage I/II, but 50% (8/16) had in supraglottic cancer patients ( $p=0.02$ ). Most patients (89%) had the symptom of hoarseness. Indirect laryngoscopy was done in all patients and direct laryngoscopy was performed in 43 (98%) patients. Twenty-one of 28 (75%) glottic cancer cases and 6 of 17 (35%) supraglottic cancer cases were treated with radiation alone, respectively. The combined treatment of surgery and radiation was used in 5 (18%) glottic and 8 (47%) supraglottic patients. Chemotherapy and radiation was used in 2 (7%) glottic and 3 (18%) supraglottic patients. There was no statistically significant difference in the use of combined modality treatments between glottic and supraglottic cancers ( $p=0.20$ ). In all patients, 6 MV X-ray was used with conventional fractionation. The fraction size was 2 Gy in 80% of glottic cancer patients compared with 1.8 Gy in 59% of the patients with supraglottic cancers. The mean total dose delivered to primary lesions were 65.98 Gy and 70.15 Gy in glottic and supraglottic patients treated, respectively, with radiation alone. Based on the collected data, 12 modules with 90 items were developed for the study of the patterns of care in laryngeal cancer.

**Conclusion:** The study items for laryngeal cancer were developed. In the near future, a web system will be established based on the items investigated, and then a nation-wide analysis on laryngeal cancer will be processed for the standardization and optimization of radiotherapy.

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Key Words: Larynx cancer, Radiotherapy, Patterns of care study