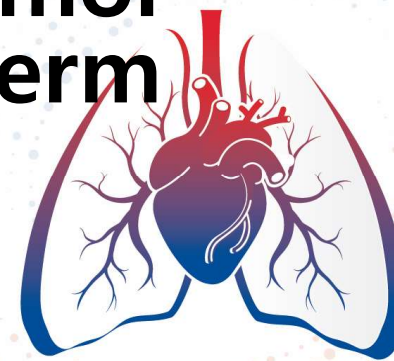


2023 대한심장혈관흉부외과학회

제55차 추계학술대회 & APELSO 2023

2023. 11. 02 (Thu) - 11. 04 (Sat), 그랜드 인터컨티넨탈 파르나스 서울

Surgical Resection In The Patients With Stage IV Thymic Epithelial Tumor – A Retrospective Study Of Long-term Outcomes



주최·주관 : 대한심장혈관흉부외과학회, 사단법인흉부외과미래포럼

- **Thymic Epithelial Tumor (TET)**

- A rare mediastinal tumor growing relatively slowly
- Commonly staging by **Masaoka-Koga staging system**

Stage IVA	Pleural or pericardial dissemination
Stage IVB	Lymphogenous or hematogenous metastases

- Treatment of choice for early-stage of TET → Complete surgical resection
- Treatment of choice for **advanced-stage** of TET → A lack of consensus

“ Complete surgical resection is difficult. ”

- Purpose of the study

- To reveal **long-term surgical outcomes** and investigate **risk factors** regarding overall survival and disease-free survival in the patients with stage IV TET

Methods

- Single-center, retrospective, observational study
- From July 2000 to November 2021
- Patient enrollment :

- ❖ Exclusion (n = 28)
 - Palliative surgery
 - Pathology other than TET (ex-sarcoma, germ cell tumor)
 - Pathologic M0

149 patients underwent surgical resection for pleural/pericardial or pulmonary seeding of TET from July 2000 to November 2021

Surgical resection for stage IV TET
(n = 121)

Masaoka-Koga stage
IVA (n = 73)

Masaoka-Koga stage
IVB (n = 48)

“ DFI “

Date of surgery

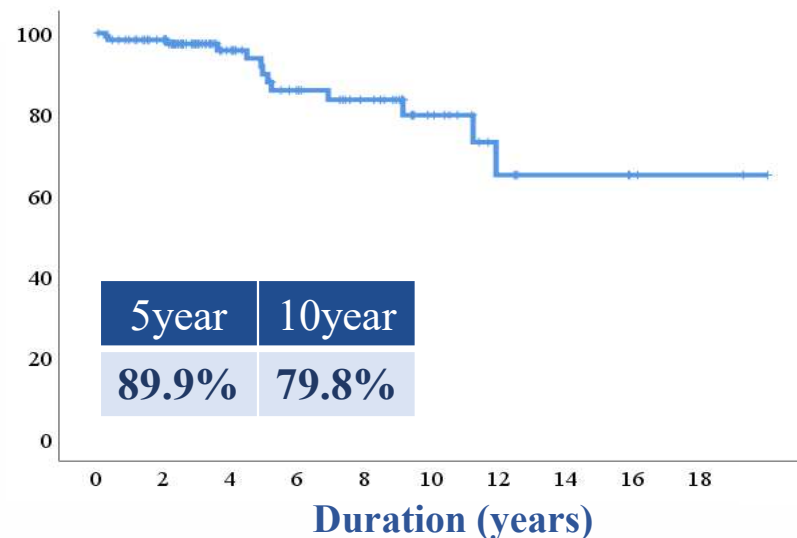
1. Date of treatment to cure recurred tumor
or
2. Date of initial CT scans revealed recurrence
(if the patient isn't treated with close follow-up)

- Disease-Free Interval (DFI) :
- Survival analysis by Kaplan-Meier curve with Log-rank test
- Risk factor analysis by Cox-hazard regression model

Results – Overall Survival

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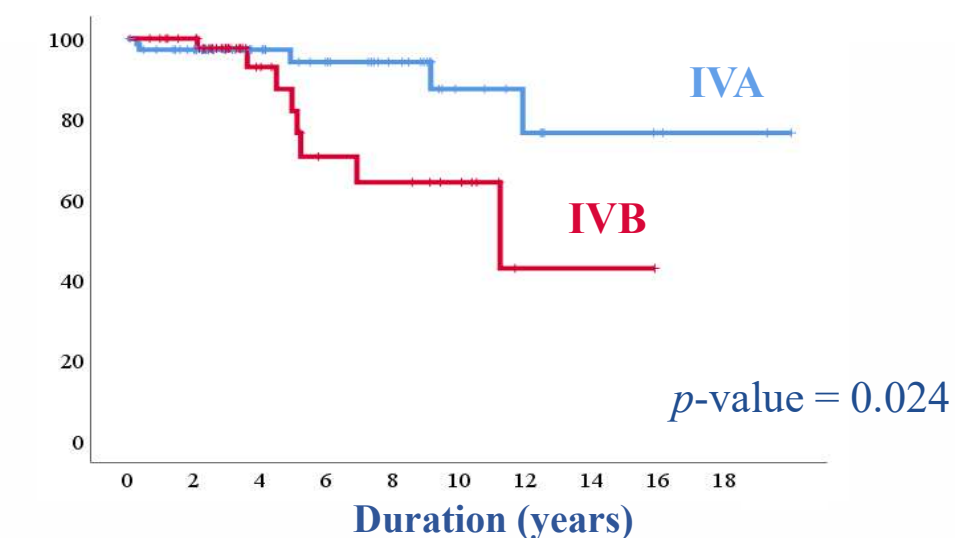
Figure 1. Overall survival of whole cohort



Patients at risk (n)

Duration (years)	0	2	4	6	8	10	12	14	16	18
Patients at risk (n)	121	107	55	39	31	17	8	5	2	1

Figure 1.1. Overall survival by Masaoka-Koga staging



Duration (years)	0	2	4	6	8	10	12	14	16	18
IVA	73	64	36	28	21	10	7	4	2	1
IVB	48	43	19	11	10	7	1	1	0	0

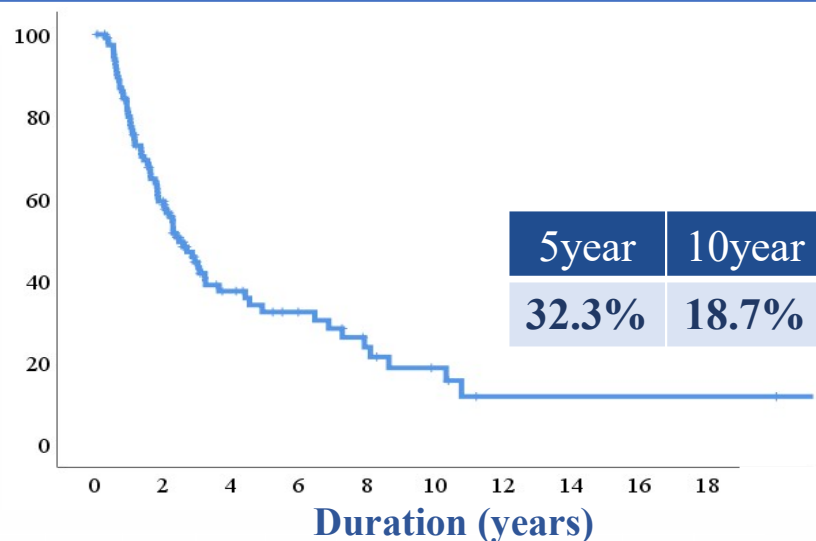
Table 1. Multivariable risk factor analysis for the overall survival

	Univariate analysis	Multivariable analysis	
	<i>p</i> - value	Odd ratio (95% CI)	<i>p</i> - value
Number of pleural or pericardial seeding	0.013	1.176 (1.061 – 1.305)	0.002
Masaoka-Koga stage (IVA vs IVB)	0.001	8.731 (1.335 – 57.098)	0.024

Results – Disease-Free Survival

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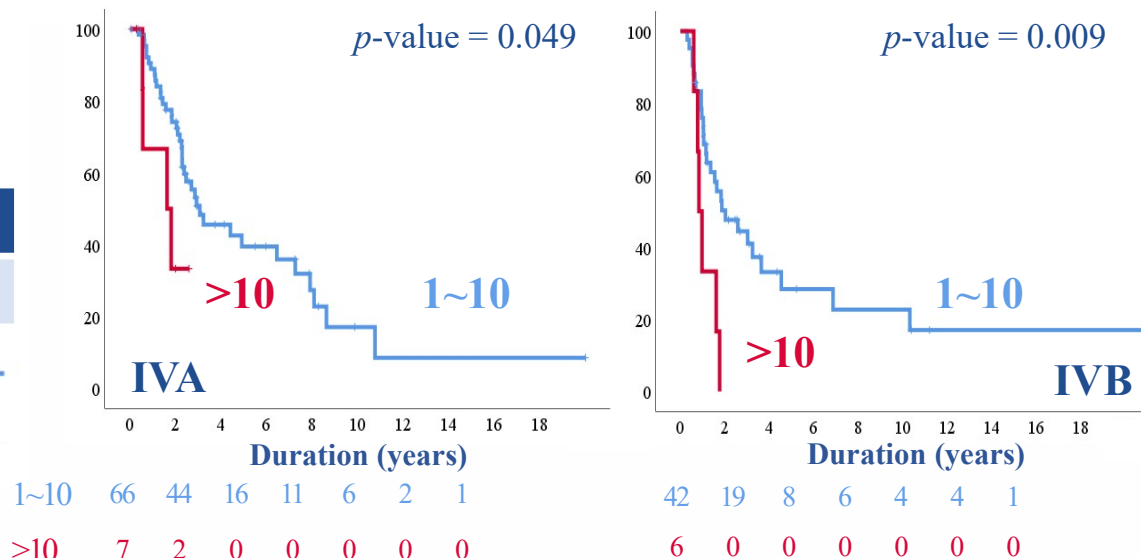
Figure 2. Disease-free survival of whole cohort



Patients at risk (n)

Duration (years)	0	2	4	6	8	10	12	14	16	18
Patients at risk (n)	121	24	19	16	10	6	2	2	2	2

Figure 2.1. Disease-free survival by number of seeding



*WHO (World health Organization)

Table 2. Multivariable risk factor analysis for the disease-free survival

	Univariate analysis	Multivariable analysis	
	<i>p</i> - value	Odd ratio (95% CI)	<i>p</i> - value
*WHO classification (A~B3 vs C)	<0.001	6.484 (3.041 – 13.779)	<0.001
Myasthenia gravis (MG) thymoma	<0.001	0.202 (0.046 – 0.887)	0.034
Neoadjuvant treatment	<0.001	2.721 (1.346 – 5.503)	0.005

Conclusion

- Surgical resection for stage IV TET patients demonstrated **favorable overall survival** rates. Still, **high recurrence rates** necessitate repeated treatment.
- As for risk factors affecting long-term surgical outcomes, **number of seeding (especially above 10), WHO classification and MG thymoma** can be emphasized.