Figure S1. Relative expression of ghrelin family transcripts in thymic epithelial tumor stages using the Masaoka-Koga staging system. Differential quantitative expression is shown as boxplot charts. Analyses were performed using the Mann-Whitney U test. GHSR, growth hormone secretagogue receptor; GOAT, ghrelin O-acyltransferase.
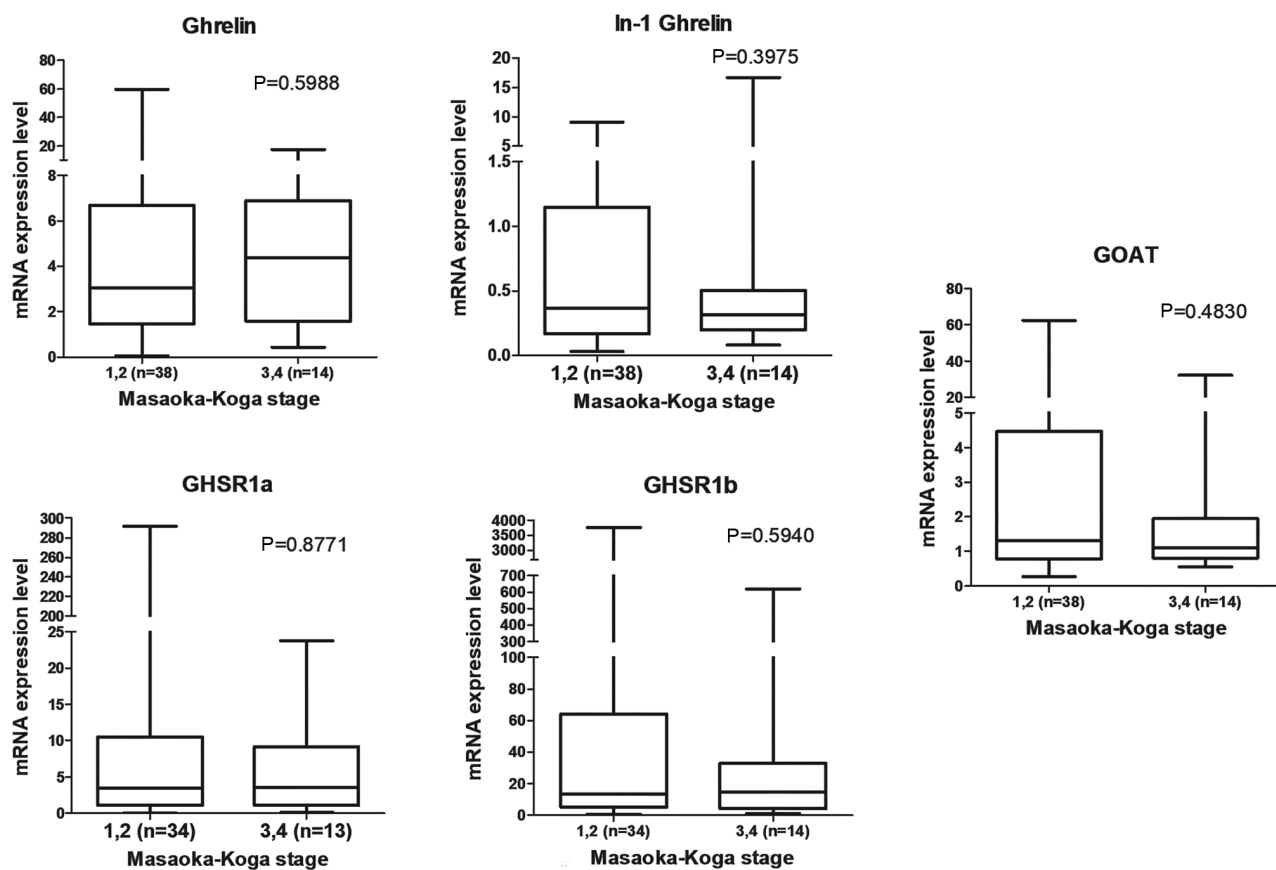
Figure S2. Analysis of relapse-free survival of patients with thymic epithelial tumors according to mRNA expression. High and low mRNA expression groups were based on median values. Log-rank (Mantel-Cox) test was used to calculate P-values. GHSR, growth hormone secretagogue receptor; GOAT, ghrelin O-acyltransferase.
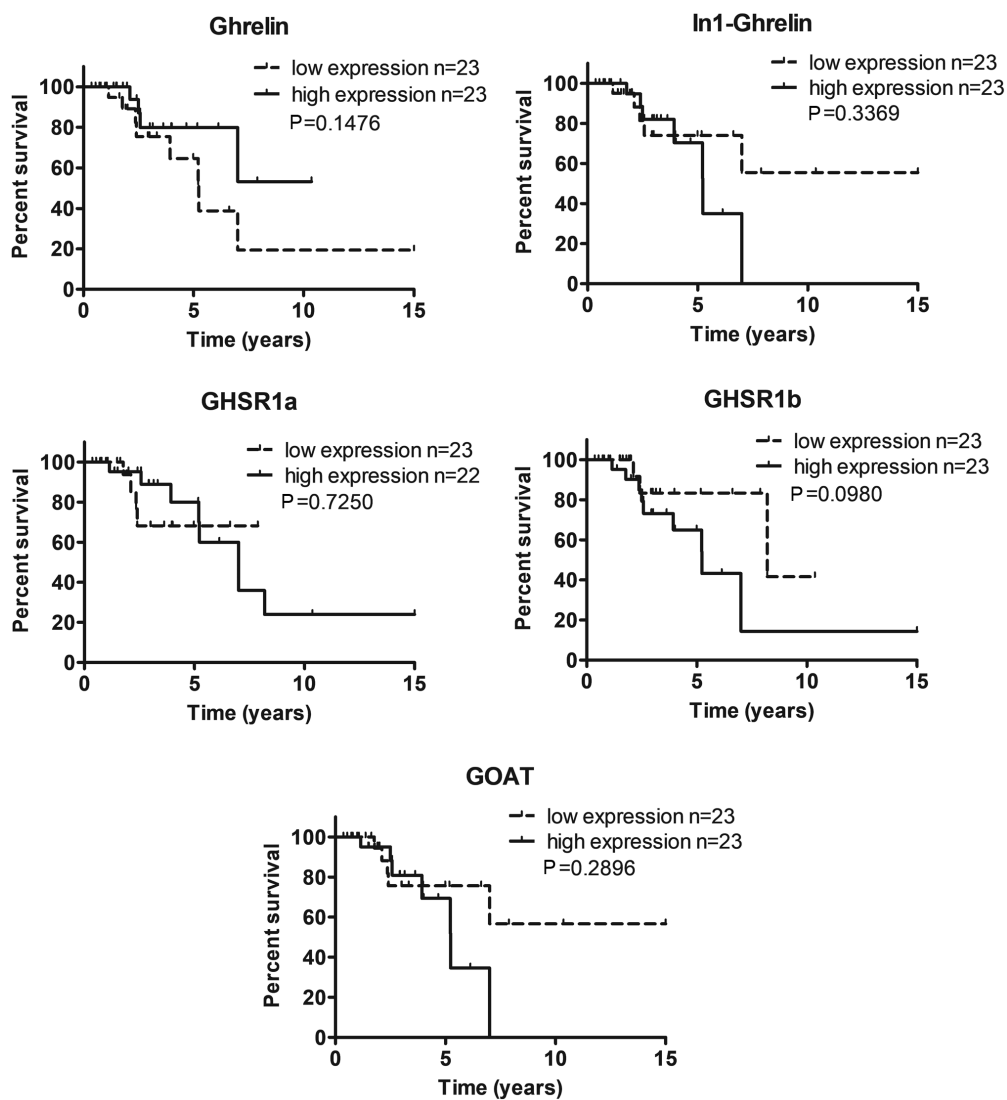
Figure S3. Comparative DNA methylation and gene expression analyses. Comparative analysis of *GHSR* methylation and gene expression of ghrelin system components in (A) thymoma and (B) TC + NECTT tissue. Analyses were performed using Spearman's rank correlation coefficient. GHSR, growth hormone secretagogue receptor; GOAT, ghrelin O-acyltransferase.
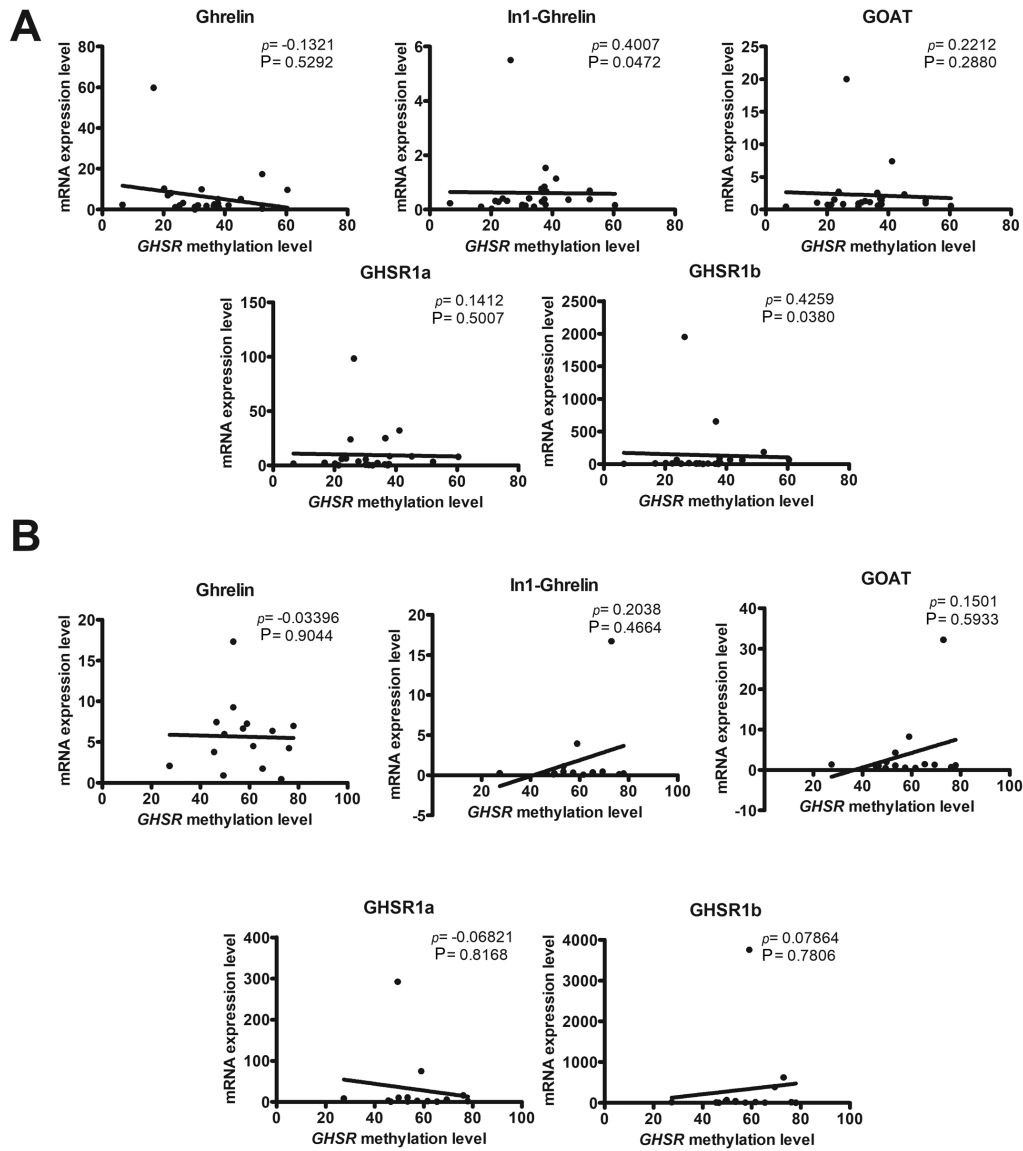
Figure S4. Correlation analysis of gene expression in thymoma tissue. Relationships between the quantitative expression of ghrelin system components in thymoma samples. Analyses were performed using Spearman's rank correlation coefficient. GHSR, growth hormone secretagogue receptor; GOAT, ghrelin O-acyltransferase.
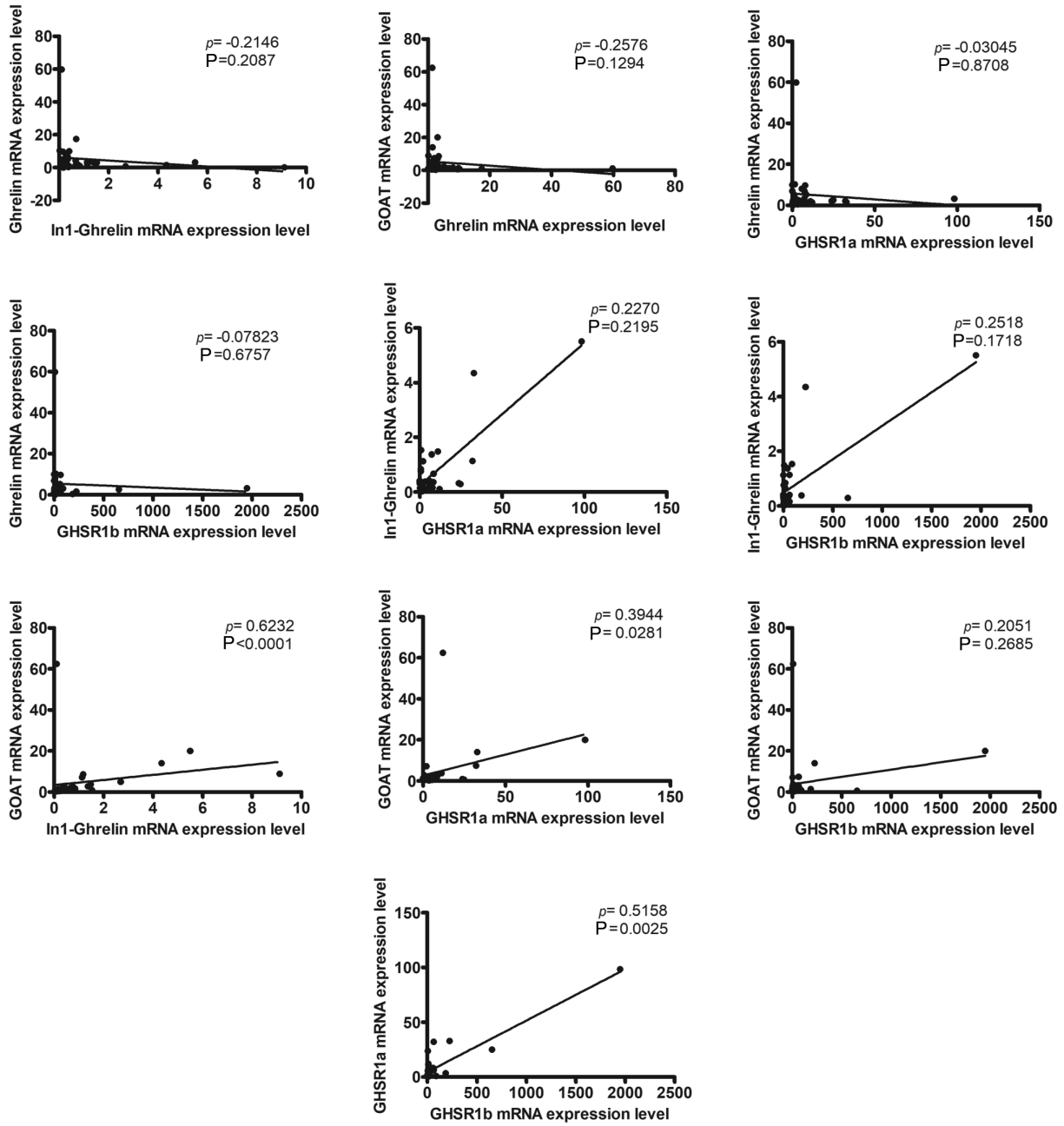
Figure S5. Correlation analysis of gene expression in thymic carcinoma and neuroendocrine tumors of the thymus. Relationships between the quantitative expression of ghrelin system components in thymoma samples. Analyses were performed using Spearman's rank correlation coefficient. GHSR, growth hormone secretagogue receptor; GOAT, ghrelin O-acyltransferase.
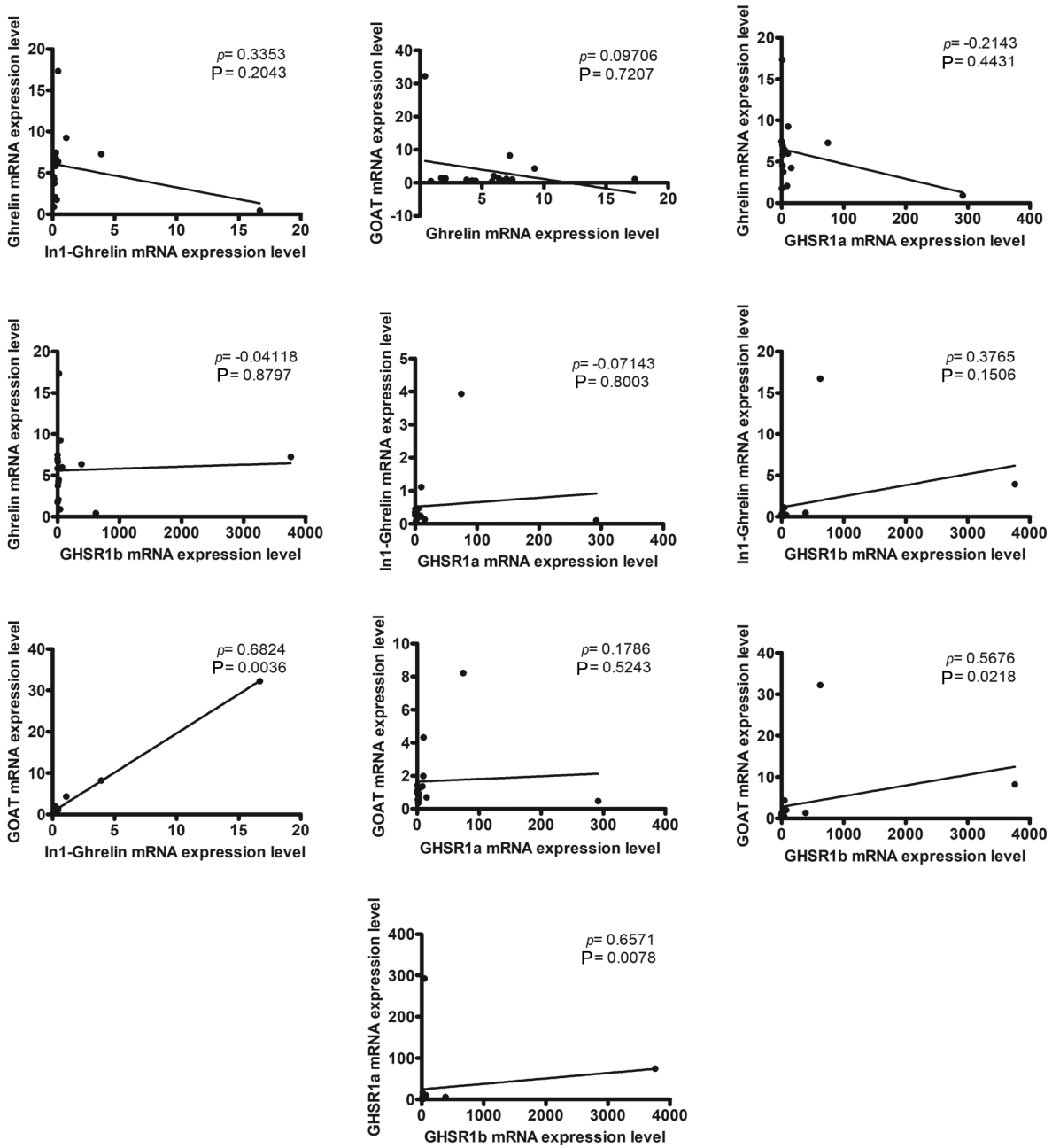
Figure S6. Relapse-free survival of patients with TETs by GHSR protein expression level. Log-rank (Mantel-Cox) test was used to calculate P-values. GHSR, growth hormone secretagogue receptor. TETs, thymic epithelial tumors.
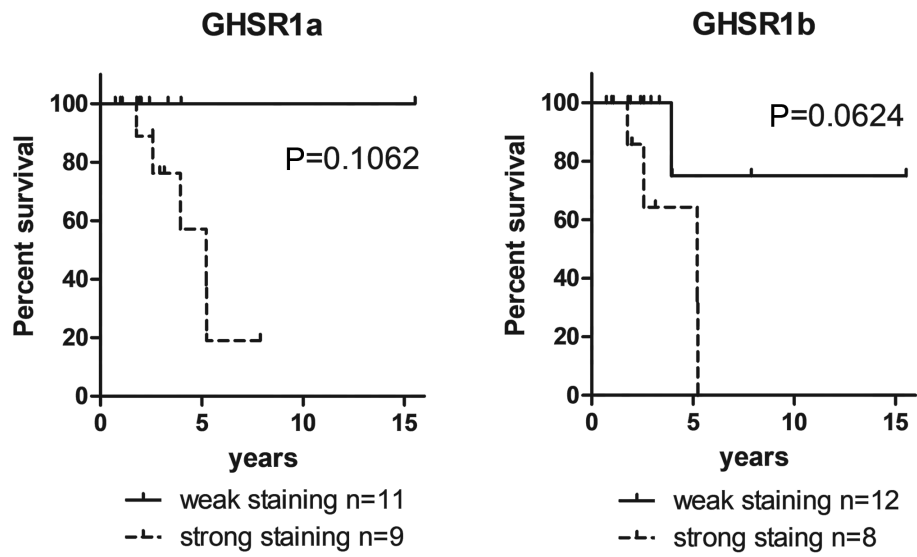
Table SI. Patient characteristics.

Characteristic	No. of patients
Sex	
Male	25
Female	33
Myasthenia gravis	
Positive	13
Negative	45
Median follow-up time, years (range)	5.25 (0.36-22.41)
Deaths	
Tumor	2
Other disease	1
Unknown cause	1
Recurrence	
Pleural dissemination	10
Lung metastasis	6
Lymph node metastasis	3
Multiple organ metastasis	2

Table SII. Masaoka-Koga clinical staging of the patients enrolled in the present study.

Stage	TET (n=58)	Thymoma (n=41)	TC[a] + NECTT (n=17)
I	18	17	1
II	22	14	8
III	8	4	4
IVA	5	4	1
IVB	5	2	3

[a]Single case of combined thymic carcinoma and type B2 thymoma. TET, thymic epithelial tumor; TC, thymic carcinoma; NECTT, neuroendocrine tumor of the thymus.

Table SIII. World Health Organization histological classification of the patients enrolled in the present study.

Type	Thymoma (n=41)	TC[a] (n=13)	NECTT (n=4)
A	6		0
AB	6		0
B1	8		0
B2	11		0
B3	10		0
Squamous cell carcinoma		8	
Other type of carcinoma		5	
Typical carcinoid	0		2
Atypical carcinoid	0		1
Small cell carcinoma	0		1

[a]Single case of combined thymic carcinoma and type B2 thymoma. TET, thymic epithelial tumor; TC, thymic carcinoma; NECTT, neuroendocrine tumor of the thymus.

Table SIV. Primers and PCR products.

Gene	Primer sequence, 5'-3'	Size, bp
Ghrelin	F: TCAGGGGTTCAGTACCAGCA	158
	R: CAAGCGAAAAGCCAGATGAG	
In-1 ghrelin	F: TCTGGGCTTCAGTCTTCTCC	215
	R: GTTCATCCTCTGCCCCTTCT	
GHSR1a	F: TGAAAATGCTGGCTGTAGTGG	168
	R: AGGACAAAGGACACGAGGTTG	
GHSR1b	F: GGACCA GAACCACAAGCAAA	107
	R: AGAGAGAAGGGAGAAGGCACA	
GOAT	F: TTGCTCTTTTTCCCTGCTCTC	161
	R: ACTGCCACGTTTAGGCATTCT	
β-actin	F: ACTCTTCCAGCCTTCCTTCCT	176
	R: CAGTGATCTCCTTCTGCATCCT	

GHSR1a, growth hormone secretagogue receptor type 1; GHSR1b, growth hormone secretagogue receptor type 2; GOAT, Ghrelin-O-acyltransferase; bp, base pair; F, forward; R, reverse.