平成25年度沼崎班
第1回全体班会議

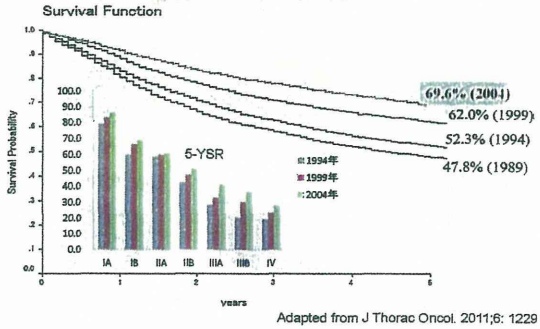
------肺癌-------

杏林大学医学部外科
呉屋朝幸

肺癌登録合同委員会　論文のテーマ

- わが国の治療成績およびその変化
  - Lung Cancer 2005;50:227（第2次）
  - J Thorac Oncol 2008;3:46（第4次）
  - J Thorac Oncol 2009;4:1364（第1～4次）
  - J Thorac Oncol 2010;5:1369（第3次）
  - J Thorac Oncol 2011;6:1229（第5次）
- TNM分類の問題点の指摘と提言
  - J Thorac Cardiovasc Surg 2006;132:316（T1）
  - J Thorac Oncol 2007;2:282（PM）
  - J Thorac Oncol 2009;4:959（VPI）
  - J Thorac Cardiovasc Surg 2012;144:431（T3）
- 予後因子および特定コホートの解析
  - J Thorac Oncol 2009;4:1247（Ⅰ期高齢者）
  - J Thorac Oncol 2010;5:1594（性差）
  - J Thorac Oncol 2012;7:850（cN2 / pN2）

本邦の肺癌手術成績の変遷



Adapted from J Thorac Oncol. 2011;6: 1229

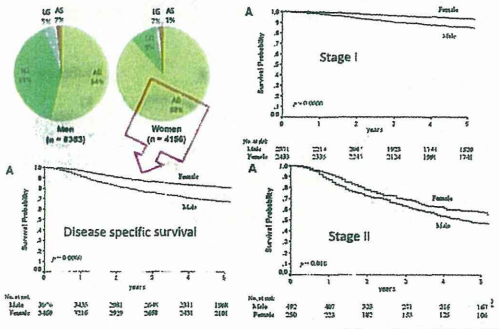
肺癌登録合同委員会と肺癌登録事業

4学会合同の事業
1）日本肺癌学会、2）日本呼吸器外科学会、3）日本呼吸器学会、
4）日本呼吸器内視鏡学会
事務局：杏林大学　呼吸器外科　→　大阪大学　呼吸器外科

これまでの事業
第1次（1994年）：1989年外科症例の後ろ向き登録　3,643例
第2次（1999年）：1994年外科症例の後ろ向き登録　7,408例
第3次（2002年）：2002年外科・内科症例の前向き登録 14,925例
第4次（2005年）：1999年外科症例の後ろ向き登録　13,310例
第5次（2010年）：2004年外科症例の後ろ向き登録　11,663例

今後の事業予定
第6次（2012年）：内科症例前向き登録
第7次（2016年）：2010年外科症例の後ろ向き登録

女性には腺癌が多く予後良好



J Thorac Oncol. 2010;5: 1594

第6次全国肺癌登録

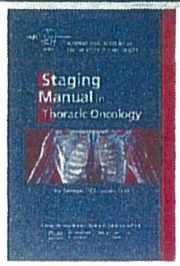
中間報告

•参加施設：307呼吸器学会修練認定施設815中 37%

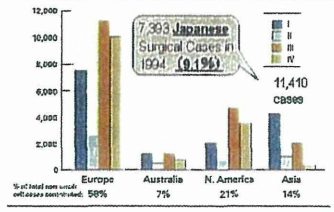
•登録症例数（2012年11月05日）：4006

TNM ver.7 2009 Contribution of JAPAN

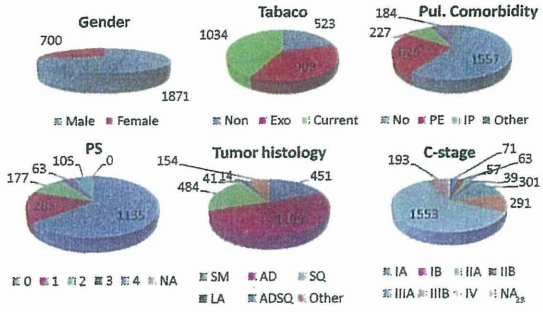
IASLC



1999-2000, 81,495 cases (100,869 – 19,374)



第6次全国肺癌登録　中間集計
2012年　内科症例　基本情報　n=2571



TNM 分類 ver.8　2016への対応

- 第2次（1994）7,408例
- 第3次（2002）14,925例
- 第4次（1999）13,310例
- 第5次（2004）11,663例

CRAB

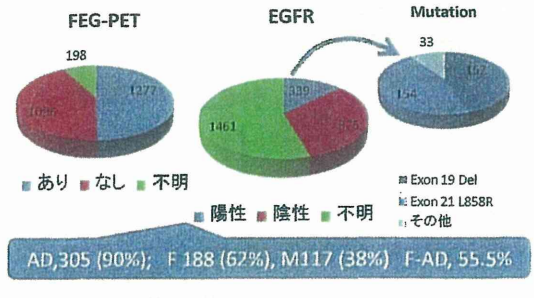
John Crowley, PhD

http://www.crab.org/PersonnelJohn.asp

47,306例の症例を提出済

（Newly retrospective の50.7%、全体の28.6%）

第6次全国肺癌登録　中間集計
2012年　内科症例　基本情報　n=2571



AD,305 (90%); F 188 (62%), M117 (38%) F-AD, 55.5%

TNM 分類 ver.8　2016

Staging Project の Time Table

- 2009-2010: prospective data correction
- 2011-2012: data follow-up
- 2013 : data analysis
- 2014 : recommendation to UICC, AJCC
- 2015 : publication in J Thorac Oncol
- 2016 : publication by UICC, AJCC

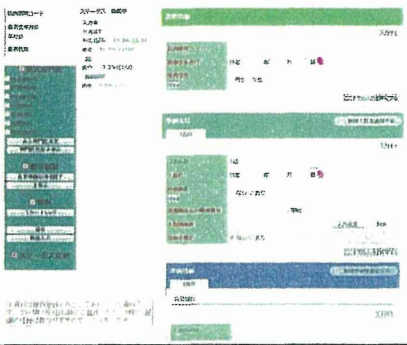
IASLC Staging Projectへ症例データを提供する意義

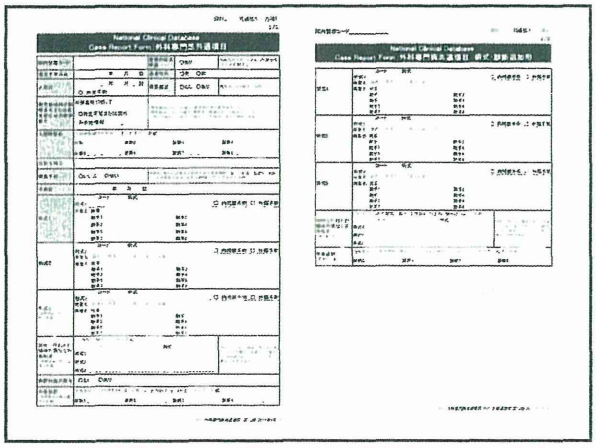
1. 国際社会への貢献
2. 日本の発言力の強化
3. 日本の日常臨床の国際標準化

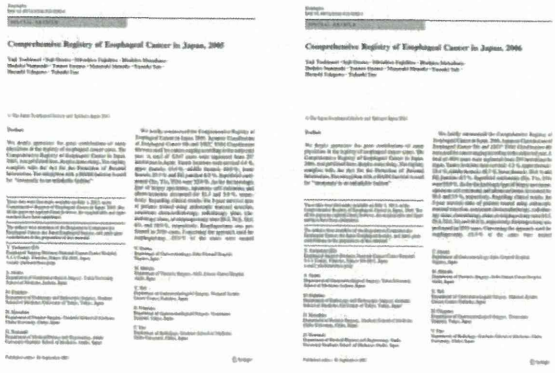
NCD の課題

- NCD:公的な存在
  日本外科学会・消化器外科学会を中心にして資金的提供(3億)し、厚労省の助成金に依存してきた。
- 維持経費　年1億　・・・・あと1年半で破綻
- 今後の財務負担
  参加学会のみならず参加施設への財務負担請求、同意は得られるか、負担比率は

NCD について

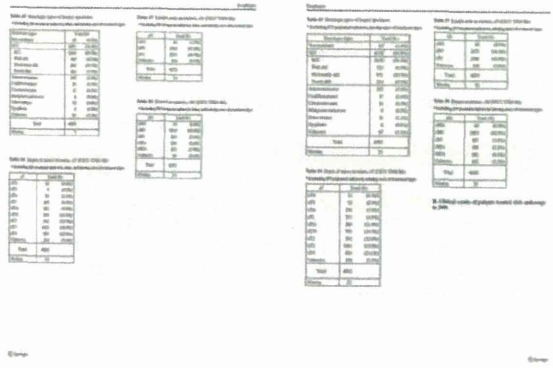






Comprehensive Registry of Esophageal Cancer in Japan, 2005

Comprehensive Registry of Esophageal Cancer in Japan, 2006



The seventh edition of the *American Joint Committee on Cancer/ International Union Against Cancer Staging Manuals*: The new era of data-driven revisions

Valerie W. Rusch, MD,[a] Thomas W. Rice, MD,[b] John Crowley, PhD,[c] Eugene H. Blackstone, MD,[b,d] Ramon Rami-Porta, MD,[e] and Peter Goldstraw, MD[f]

The esophageal cancer staging system was also revised through an analogous effort, in this case initiated by the AJCC. As for lung cancer, there had been no revisions in the esophageal cancer staging system for the 2 previous editions of the staging manual. A growing body of literature concerning factors associated with survival, including both anatomic and nonanatomic cancer characteristics, suggested that the staging system in the sixth edition of the staging manual no longer accurately categorized tumors. In addition, there was discordance between the esophageal and the gastric staging systems, especially with respect to N staging, which was based on lymph node anatomic location for esophageal tumors and the number of involved lymph nodes for gastric tumors. These differences made it difficult to stage the increasingly common adenocarcinomas of the gastroesophageal junction that theoretically could be classified according to either staging system. Therefore, the AJCC Lung and Esophagus Taskforce spearheaded an initiative to develop a data-driven staging system by forming the Worldwide Esophageal Cancer Collaboration (WECC) under the leadership of Drs Tom Rice and Eugene Blackstone at the Cleveland Clinic. Through the WECC, data were assembled on more than 7000 patients in 23 institutions on 3 continents, 4627 of whom underwent surgery alone for cancers of the esophagus and gastroesophageal junction. In several consensus meetings, analysis of the WECC data were discussed with the AJCC Digestive Cancer Task Force and the UICC to harmonize the esophageal and gastric staging systems and to arrive at final recommendations for revision of the esophageal cancer staging system. Use of a novel statistical methodology, Random Forests, allowed self-validation of the analyses.[10]

From the Thoracic Service, Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York, NY; Department of Thoracic and Cardiovascular Surgery,[b] Cleveland Clinic, Cleveland, Ohio; Cancer Research and Biostatistics,[c] Seattle, Wash; Department of Quantitative Health Sciences,[d] Cleveland Clinic, Cleveland, Ohio; Thoracic Surgery Service,[e] Hospital Universitari Mutua Terrassa, Terrassa, Spain; and Royal Brompton Hospital,[f] Imperial College, London, United Kingdom.

Address for reprints: Valerie W. Rusch, MD, Memorial Sloan-Kettering Cancer Center, Thoracic Service, Department of Surgery, 1275 York Avenue, Room C-607, New York, NY 10021 (E-mail: ruschv@mskcc.org).

J Thorac Cardiovasc Surg 2010;139:819-21

0022-5223/$36.00

doi:10.1016/j.jtcvs.2010.02.039

WECC

Aim 1: Refine and expand staging

7th edition esophageal cancer staging was derived from only esophagectomy data. Improvements will require:

A) Obtaining better homogeneity of Stage 0 and Stage IV. This requires abandoning the restrictive definitions of these stage groupings and changing the composition of adjacent Stage IA and Stage IIIC (Figure 1).

B) Improving homogeneity of Stage IIB adenocarcinoma (Figure 1A) and Stage IIA and IIB squamous cell carcinoma (Figure 1B). This requires expanding our database of these less common cancers.

C) Adding clinical (cStage), post-induction clinical and post-definitive nonsurgical clinical (ycStage), and post-induction pathologic (ypStage) staging recommendations. This requires expanding the data analysis.

WECC

Aim 1: Refine and expand staging

7th edition esophageal cancer staging was derived from only esophagectomy data. Improvements will require:

D) Assessing other non-anatomic tumor characteristics that affect survival. This requires expanding data elements beyond histopathologic cell type, histologic grade, and cancer location.

E) Adding non-esophagectomy survival data, endoscopic treatment in Stage 0 and Stage IA, and palliative therapy for Stage IV. This requires partnering with non-surgical specialties and professional associations and groups.

F) Adding cancer of the cervical esophagus. This requires partnering and harmonizing with the head and neck task force, mirroring the process used with the gastric cancer task force in the 7th edition.

WECC

Aim 2: Develop basis for clinical decision-making (Decision Model)

The contemporary challenge of stage-directed therapy is to recommend the right treatment strategy to the right patient in the face of uncertainty (inaccuracy) of clinical stage and variable condition of the patient. It is our hypothesis that by refining staging and coupling it with detailed patient and treatment data, we will be able to generate models helpful for clinical decision-making. To apply these models to new patients, we will program a smart phone–based strategic decision support and informed consent tool (app), accessible worldwide, by which outcome of alternative treatment strategies may be assessed (Figure 2). Further, if the treatment involves adjuvant therapy, it is important to estimate the likelihood that the patient will be a responder, because only responders will benefit.

WECC

Aim 3: Create personalized, patient-specific prognostic tools (Prognostic Model)
Once a patient is treated and the cancer removed and pathologically characterized, prognosis needs to be updated. It is also important at that juncture to determine if further adjuvant therapy will improve prognosis and if the patient is likely to respond. As at time of initial treatment decision-making, we believe patients will benefit from knowing their personal prognosis at each step of their course, preferably using a smart phone–based tool (Figure 2).

WECC Data Elements Targeted Variables List for 8th Edition
1) Demographics
a) Age at treatment
b) Gender (Male = 1, Female = 0)
c) Race (USA: Black, White/Caucasian, Asian, Native American, Hawaiian/Pacific Islander, Other, International: requires data dictionary)
d) Patient country of origin
2) Patient Characteristics
a) Height (cm)
b) Weight (kg)
c) BMI (if height or weight is not available)
d) Weight loss within 3 months of treatment (number of kg lost)
e) Zubrod Performance Status
f) ECOG Performance Status

WECC Data Elements Targeted Variables List for 8th Edition
3) Co-morbidities
a) Diabetes
i) Insulin dependent
ii) Non-Insulin dependent
b) Cardiovascular
i) Coronary Artery Disease
ii) Arrhythmia
iii) Hypertension
iv) Peripheral Arterial Disease
c) Respiratory
i) Smoking history
Current smoker
Past smoker
ii) Preoperative spirometry
Date (expressed as negative interval in days before treatment)
FEV1 (% of predicted)
FVC (% of predicted)
d) Renal
Creatinine at treatment (provide units)
e) Liver
Bilirubin at treatment (provide units)
f) Cancer at other site

WECC Data Elements Targeted Variables List for 8th Edition
4) Characteristics of Esophageal Cancer (Clinical)
a) Date cancer diagnosed
b) Barrett esophagus
c) Barrett surveillance program
d) Clinical Staging according to AJCC 7th Edition
i) TNM Esophageal Cancer Classification (Clinical)
cT (0, is, 1a, 1b, 2, 3, 4a, 4b, X) (subclassification if available)
cT4 description
cN (0, 1, 2, 3, X) (number of positive lymph nodes if available)
cM (0, 1, X) (site for M1 if available)
cM1 description
ii) Location in esophagus (eg, upper third, middle third, lower third, or distance from incisors, etc)
iii) Histopathologic cell type (Adeno, Squamous, Adenosquamous, Other cell type)
iv) Histologic grade (Gx [unknown], G1 [well], G2 [moderate], G3 [poor], G4 [undifferentiated])

WECC Data Elements Targeted Variables List for 8th Edition
5) Characteristics of Esophageal Cancer (Clinical Post Therapy or Neoadjuvant Therapy)
a) Chemotherapy only
b) Radiotherapy only
c) Combined chemoradiotherapy
d) Date treatment started (expressed only as calendar year)
e) Post therapy Staging according to AJCC 7th Edition
i) TNM Esophageal Cancer Classification (Clinical Post Therapy or Neoadjuvant Therapy)
ycT (0, is, 1a, 1b, 2, 3, 4a, 4b, X) (subclassification if available)
ycN (0, 1, 2, 3, X) (number of positive lymph nodes if available)
ycM (0, 1, X) (site for M1 if available)
ii) Location in esophagus (eg, upper third, middle third, lower third, or
iii) Histopathologic cell type (Adenocarcinoma, Squamous cell carcinoma,
iv) Histologic grade (Gx [unknown], G1 [well], G2 [moderate], G3 [poor], G4 [undifferentiated])

WECC Data Elements Targeted Variables List for 8th Edition
6) Esophagectomy
a) Date of esophagectomy (expressed only as calendar year of operation)
b) Approach
i) Minimally Invasive Esophagectomy
Total
Hybrid
ii) Thoracotomy
iii) Thoracoabdominal
iv) Transhiatal
c) Reconstruction conduit
i) Stomach
ii) Colon
iii) Jejunum

WECC Data Elements Targeted Variables List for 8th Edition
7) Pathologic Tumor Characteristics (Pathologic)
a) Pathologic Staging according to AJCC 7th Edition
i) TNM Esophageal Cancer Classification
pT (0, is, 1, 2, 3, 4a, 4b, X) (subclassification if available)
pT4 description
pN (0, 1, 2, 3, X) (number of positive lymph nodes if available)
Lymph node stations
pM (0, 1, X) (site for M1 if available)
pM1 description
ii) Location in esophagus (eg, upper third, middle third, lower third, or distance from incisors, etc)
iii) Histopathologic cell type (Adeno, Squamous, Adenosquamous, Other cell type)
iv) Histologic grade (Gx [unknown], G1 [well], G2 [moderate], G3 [poor], G4 [undifferentiated])

WECC Data Elements Targeted Variables List for 8th Edition
8) Characteristics of Esophageal Cancer (Pathologic Post Neoadjuvant Therapy)
a) Pathologic Staging according to AJCC 7th Edition
i) TNM Esophageal Cancer Classification
ypT (0, is, 1, 2, 3, 4a, 4b, X) (subclassification if available)
ypN (0, 1, 2, 3, X) (number of positive lymph nodes if available)
ypM (0, 1, X) (site for M1 if available)
ii) Location in esophagus (eg, upper third, middle third, lower third, or distance from incisors, etc)
iii) Histopathologic cell type (Adeno, Squamous, Adenosquamous, Other cell type)
iv) Histologic grade (Gx [unknown], G1 [well], G2 [moderate], G3 [poor], G4 [undifferentiated])
9) Lymph Nodes at Esophagectomy
a) Number of locoregional lymph nodes sampled or resected
b) Extracapsular lymph node involvement

WECC Data Elements Targeted Variables List for 8th Edition
10) Other AJCC Variables
a) Distance to proximal edge of tumor from incisors
b) Distance to distal edge of tumor from incisors
c) Lymphovascular invasion (LVI)
d) Treatment Planning
Clinical stage used
National guidelines used

WECC Data Elements Targeted Variables List for 8th Edition
11) Post-operative Adjuvant Therapy
a) Chemotherapy only
b) Radiotherapy only
c) Combined chemoradiotherapy
d) Interval (days) after esophagectomy when treatment started

WECC Data Elements Targeted Variables List for 8th Edition
12) Outcome
a) Death from any cause
i) Interval (days) from treatment to death
ii) For living patients, interval (days) from treatment to last known follow-up
b) Recurrence of esophageal cancer
i) Interval (days) from treatment to recognition of cancer recurrence
ii) For living patients, interval (days) from treatment to last known cancer-free follow-up
(or death before cancer occurrence)

UICC

TNM Core Group
2013 Annual Meeting
6-7 May 2013
Geneva

9. TNM Classification - 8th Edition

The 8th edition of the TNM classification will be issued in **September 2015**. This timeline will allow the new edition to debut at the AJCC annual meeting, and meet the timelines agreed with their new publisher. Dr. Compton reported that it was the wish of the AJCC to have the closest working relationship yet with the UICC, and this was endorsed and fully reciprocated by the UICC.
The disease sites will be finalised by June 13th 2013, editorial board and expert panel chairs identified by July 2013, mechanism for evidence based review defined August 2013, September 2013 - workflow finalised, and in October 2013 the expert panel chair orientation will be complete. The latter process is new for this edition and is seen as a very positive development, which will ensure that all chairs have a clear understanding of the rules, regulations, and process of TNM. Dr. Amin is already in contact with Dr. Brierley.

UICC experts will also be required as members of the AJCC expert panels. The following UICC representatives were agreed:

EXPERT PANEL	UICC REPRESENTATIVE(S)
Upper GI	Dr Wittekind Dr Groome & Dr Brierley to liaise with IASLC for Oesophagus

IASLC Staging and Prognostic Factors Committee

General Meeting

AGENDA

Sydney, Friday, 25th, and Saturday, 26th, October 2013

Date and time: Friday, 25th October 2013, 08:00 to 17:30 hours, approximately.
Saturday, 26th October 2013, 08:00 to 14:00 hours, approximately.

Place: Sydney Exhibition & Convention Centre. Room BAYSIDE 103. Sydney, Australia.

Participants summoned:

Saturday, 26th October 2013		
08:00	Coffee	
8:30	SMALL CELL: Database and methodology	Kari Chansky
	SMALL CELL: Results of analyses	Andrew Nicholson
	OESOPHAGEAL CANCER	
09:30	Update on oesophageal cancer	Tom Rice

Comprehensive Registry of Esophageal Cancer in Japan

Yuji Tachimori

Ozawa S, Numasaki H, Udagawa H,
Shinoda M, Toh Y, Matsubara H

National Cancer Center Hospital, Tokyo
The Registration Committee for Esophageal Cancer,
The Japanese Esophageal Society

1965 The Japanese Esophageal Society was established.

1976 The registration committee for esophageal cancer was created.

1979 The first report, "Comprehensive registry of esophageal cancer in Japan (1976)" was published.

Esophagus
DOI 10.1007/s10388-015-0393-5

SPECIAL ARTICLE

Comprehensive Registry of Esophageal Cancer in Japan, 2006

Yuji Tachimori · Soji Ozawa · Mitsuhiro Fujishiro · Hisahiro Matsubara · Hodaka Numasaki · Tsuneo Oyama · Masayuki Shinoda · Yasushi Toh · Harushi Udagawa · Takashi Uno

Table 15 Histologic types of biopsy specimens

*** Excluding 277 treatment unknown, missing cases of treatment types**

Histologic types	Total (%)	
Not examined	65	(1.4%)
SCC	4258	(90.8%)
SCC	2650	(56.5%)
Well diff.	323	(6.9%)
Moderately diff.	971	(20.7%)
Poorly diff.	314	(6.7%)
Adenocarcinoma	182	(3.9%)
Undifferentiated	17	(0.4%)
Carcinosarcoma	14	(0.3%)
Malignant melanoma	9	(0.2%)
Other tumors	50	(1.1%)
Dysplasia	0	(0.0%)
Unknown	97	(2.1%)
Total	4692	
Missing	25	

Table 12 Tumor location

*** Excluding 277 treatment unknown, missing cases of treatment types**

Location of tumor	Total (%)	
Cervical	198	(4.2%)
Upper thoracic	631	(13.4%)
Middle thoracic	2290	(48.7%)
Lower thoracic	1224	(26.0%)
Abdominal	247	(5.3%)
EG	31	(0.7%)
EG-Junction(E=G)	26	(0.6%)
Cardia (G)	6	(0.1%)
Unknown	46	(1.0%)
Total	4699	
Missing	5	

Table 20 Clinical stage (UICC TNM 6th)

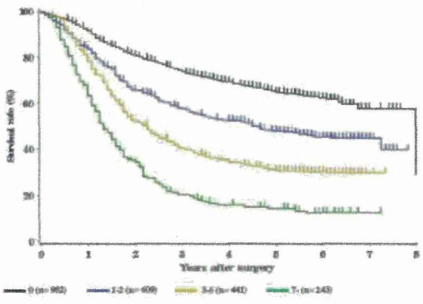
* Excluding 277 treatment unknown, missing cases of treatment type

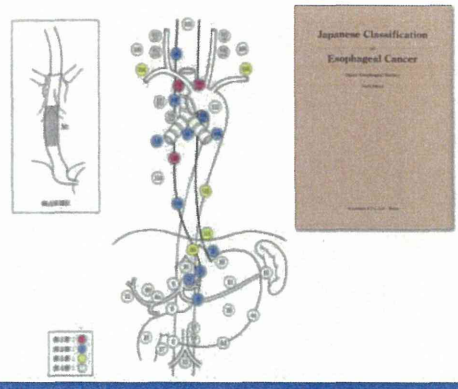
cStage	Endoscopic treatment		Chemotherapy and/or radiotherapy (%)		Surgery				Total (%)	
					Palliative surgery (%)		Esophagectomy (%)			
0	142	(20.4%)	1	(0.1%)	1	(0.6%)	12	(0.5%)	156	(3.3%)
I	478	(68.7%)	168	(12.8%)	42	(26.3%)	588	(23.3%)	1276	(27.2%)
IIA	6	(0.9%)	121	(9.2%)	28	(17.5%)	468	(18.5%)	623	(13.3%)
IIB	8	(1.1%)	89	(6.8%)	8	(5.0%)	333	(13.2%)	438	(9.3%)
III	14	(2.0%)	456	(34.7%)	48	(30.0%)	832	(32.9%)	1350	(28.8%)
IV	2	(0.3%)	127	(9.7%)	3	(1.9%)	28	(1.1%)	160	(3.4%)
IVA	1	(0.1%)	46	(3.5%)	3	(1.9%)	56	(2.2%)	106	(2.3%)
IVB	10	(1.4%)	216	(16.5%)	15	(9.4%)	125	(4.9%)	366	(7.8%)
Unknown	35	(5.0%)	89	(6.8%)	12	(7.5%)	84	(3.3%)	220	(4.7%)
Total	696		1313		160		2526		4695	
Missing	1		2		0		19		22	

Table 55 Histological classification

Histological classification	Cases (%)	
Not examined	2	(0.1%)
SCC	2220	(80.2%)
SCC	348	(13.8%)
Well diff.	486	(19.2%)
Moderately diff.	1015	(40.1%)
Poorly diff.	106	(15.3%)
Adenocarcinoma	80	(3.2%)
Barrett's adenocarcinoma	42	(1.7%)
Adenosquamous cell carcinoma	11	(0.4%)
(Co-existing)	2	(0.1%)
(Mucoepidermoid carcinoma)	2	(0.1%)
Adenoid cystic carcinoma	2	(0.1%)
Basaloid carcinoma	37	(1.5%)
Undiff. carcinoma (small cell)	13	(0.5%)
Undiff. carcinoma	6	(0.2%)
Other carcinoma	7	(0.3%)
Sarcoma	1	(0.0%)
Carcinosarcoma	22	(0.9%)
Malignant melanoma	8	(0.3%)
Dysplasia	3	(0.1%)
Other	20	(0.8%)
Unknown	36	(1.5%)
Total	2528	
Missing	17	

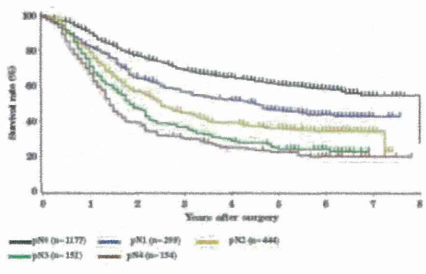
Fig. 17 Survival of patients treated by esophagectomy in relation to number of metastatic node

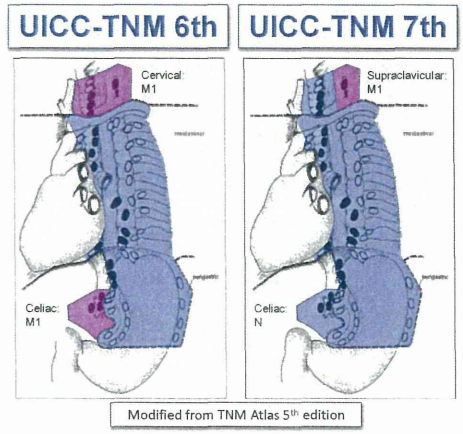




Lymph nodes of colored stations are recommended for dissection as regional nodes for tumor in the mid-esophagus in Japan.

Fig. 13 Survival of patients treated by esophagectomy in relation to lymph node metastasis: pN (JSED TNM 9th)





Modified from TNM Atlas 5th edition

Comprehensive Registry of Esophageal Cancer in Japan, 2001/2002/2003
12880

↓

Primary thoracic esophageal cancer
10896

↓

Underwent esophagectomy
5734

↓

Three-field dissection for R0 resection
1768

↓

Locations of pathologic metastatic node
1427

↓

Prognostic evaluation
1309

From 155 institutions

Characteristics (n=1309)

Characteristic	No. (%)
Median Age (range), y	62.0 (20-84)
Male/female	1138 (86.9%) / 171 (13.1%)
Tumor location	
Upper	222 (17.0%)
Middle	761 (58.1%)
Lower	356 (24.9%)
Histologic cell type	
Squamous cell carcinoma	1279 (97.7%)
Adenocarcinoma	7 (0.5%)
Others	23 (1.8%)
Preoperative therapy	
Neoadjuvant chemotherapy	92 (7.0%)
Neoadjuvant chemoradiotherapy	174 (13.3%)
Definitive chemoradiotherapy	14 (1.1%)

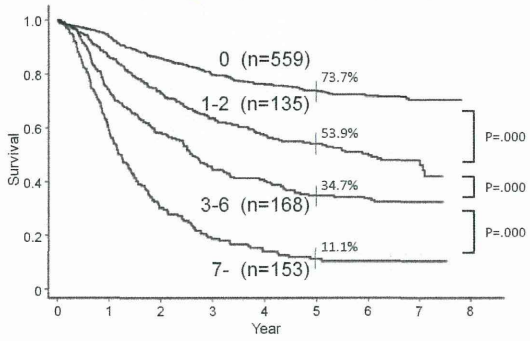
Pathological TNM Classification

T classification	No. (%)
TX	15 (1.2%)
T0	22 (1.7%)
Tis	11 (0.8%)
T1a	105 (8.0%)
T1b	355 (27.1%)
T2	195 (14.9%)
T3	583 (44.5%)
T4a	22 (1.7%)
N number (including supraclavicular node)	
N0	559 (42.7%)
N(1-2)	292 (22.3%)
N(3-6)	279 (21.3%)
N(7-)	179 (13.7%)
M classification	
M1 (supraclavicular node)	190 (14.5%)

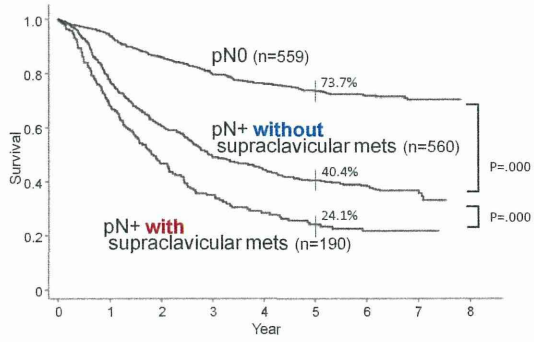
Operative Mortality and Follow-up

- 30-day operative mortality rate was 1.0% (13/1309).
- Median follow-up of surviving patients was 6.4 years.

Survival by number of involved lymph nodes including supraclavicular nodes



Survival by involved lymph node location

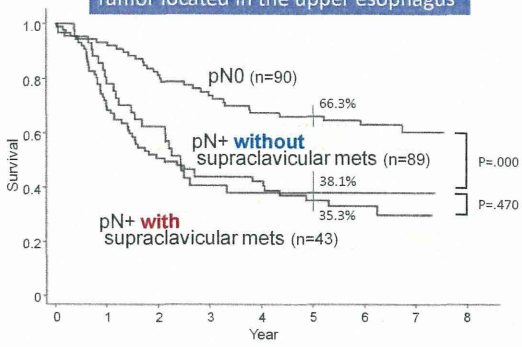


Univariate analysis: overall survival

Factor	5 y survival (%)	*P* value
Sex		0.000
Male / female	50.1 / 69.5	
Tumor location		0.078
Upper / Middle / Lower	49.0 / 55.6 / 48.0	
Histologic cell type		0.666
Squamous / Adeno / Others	52.7 / 47.6 / 47.2	
T		0.000
T0 / Tis / T1a / T1b / T2 / T3 / T4a	53.0 / 80.0 / 77.1/68.9/52.7 / 37.5 / 30.0	
N number including supraclavicular		0.000
N0 / N(1-2) / N(3-6) / N(7-)	73.7 / 53.9 / 34.7 / 11.1	
Supraclavicular metastasis		0.000
N0 / N+ / N+ with supraclavicular	73.7 / 40.4 / 24.1	

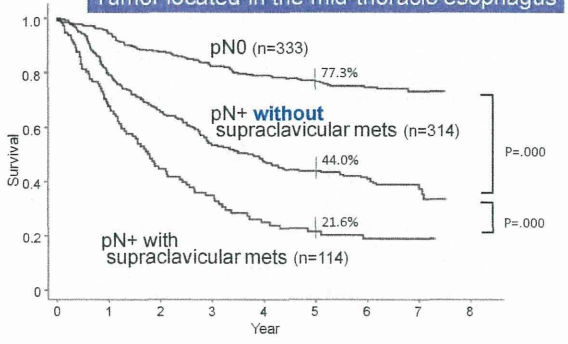
Survival by involved lymph node location

Tumor located in the upper esophagus



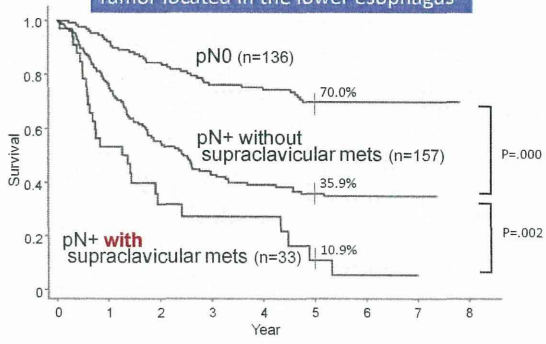
Survival by involved lymph node location

Tumor located in the mid-thoracic esophagus



Survival by involved lymph node location

Tumor located in the lower esophagus



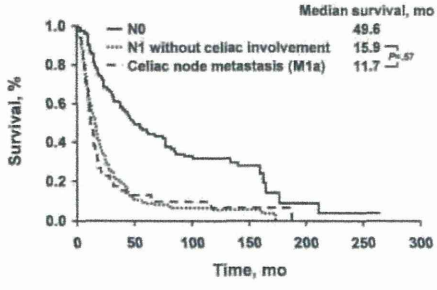
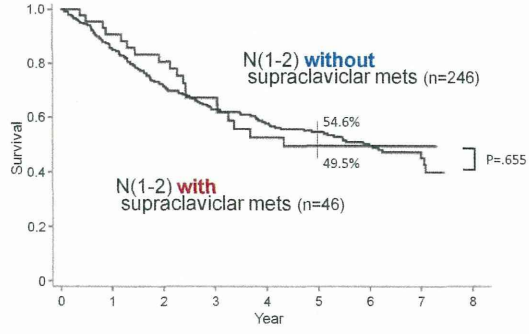


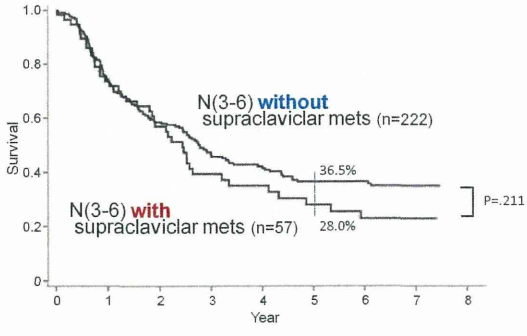
Fig. 2 Survival by lymph node status and location.

From Mayo Clinic Disease of the Esophagus 2009

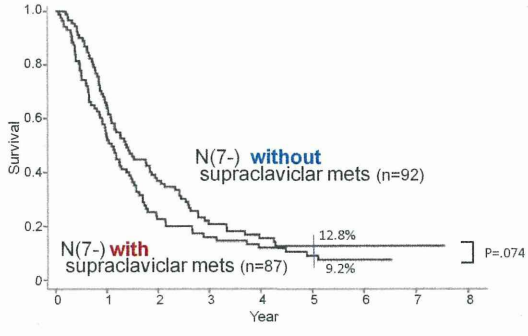
Survival by number of involved lymph nodes and supraclavicular status



Survival by number of involved lymph nodes and supraclavicular status



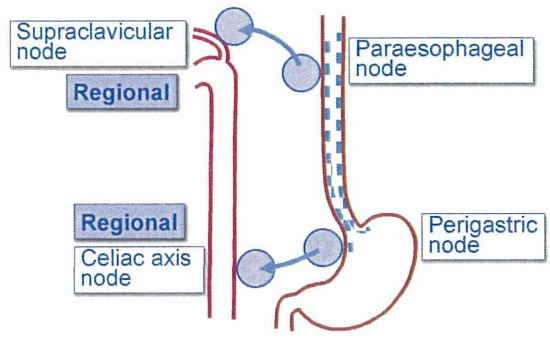
Survival by number of involved lymph nodes and supraclavicular status



Multivariate analysis: overall survival

Factor	Risk ratio	95% CI	*P* value
Sex			
Male / female	1.721	1.286-2.304	0.000
T category			
T3, T4 / Tis, T1a, T1b, T2	1.592	1.335-1.899	0.000
N number (including supraclavicular node)			
N(1-2) / N0	1.904	1.500-2.416	0.000
N(3-6) / N0	2.701	2.132-3.423	0.000
N(7-) / N0	5.144	3.939-6.717	0.000
Supraclavicular node metastasis			
With / without	1.224	0.990-1.514	0.062

Lymphatic drainage of the esophagus



Area	登録 number	incidence	5y survival	EI
100L	1	0.1	0.0	0.0
100R	1	0.1	100.0	0.1
101L	82	6.3	26.9	1.7
101R	116	8.9	31.1	2.8
102midL	17	1.3	22.1	0.3
102midR	21	1.6	21.8	0.3
102upL	5	0.4	0.0	0.0
102upR	3	0.2	0.0	0.0
103		0.0		0.0
104L	87	6.6	17.6	1.2
104R	107	8.2	25.6	2.1
105	61	4.7	16.0	0.7
106pre	2	0.2	50.0	0.1
106recL	162	12.4	26.9	3.3
106recR	284	21.7	31.8	6.9
106tbL	44	3.4	26.0	0.9
106tbR	1	0.1	0.0	0.0
107	96	7.3	19.7	1.4
108	145	11.1	26.3	2.9
109L	34	2.6	15.1	0.4
109R	36	2.8	22.0	0.6
110	132	10.1	29.5	3.0
111	26	2.0	9.6	0.2
112	61	4.7	28.7	1.3
1	205	15.7	27.8	4.4
2	166	12.7	30.4	3.9
3	156	11.9	24.7	2.9
7	161	12.3	24.9	3.1
8	24	1.8	4.6	0.1
9	48	3.7	32.0	1.2
11	22	1.7	26.1	0.4
16	3	0.2	0.0	0.0
19	1	0.1	0.0	0.0

	登録			>=2	JES 10th
				>=1	
Upper	222			>=0.5	
Area	number	incidence	5y survival	EI	
100L	0	0.0	0.0	0.0	4
100R	0	0.0	0.0	0.0	4
101L	17	7.7	27.5	2.1	1
101R	31	14.0	47.3	6.6	1
102midL	5	2.3	40.0	0.9	3
102midR	3	1.4	66.7	0.9	3
102upL	2	0.9	0.0	0.0	4
102upR	0	0.0	0.0	0.0	4
103	0	0.0		0.0	4
104L	14	6.3	35.7	2.3	2
104R	26	11.7	38.4	4.5	2
105	11	5.0	36.4	1.8	1
106pre	1	0.5	100.0	0.5	3
106recL	30	13.5	19.3	2.6	1
106recR	68	30.6	24.6	7.5	1
106tbL	15	6.8	42.9	2.9	2
106tbR	0	0.0	0.0	0.0	3
107	6	2.7	59.0	1.6	2
108	12	5.4	22.2	1.2	2
109L	2	0.9	0.0	0.0	2
109R	2	0.9	0.0	0.0	2
110	6	2.7	20.0	0.5	3
111	2	0.9	50.0	0.5	3
112	3	1.4	33.3	0.5	3
1	9	4.1	22.2	0.9	3
2	7	3.2	0.0	0.0	3
3	7	3.2	19.0	0.6	3
7	5	2.3	0.0	0.0	3
8	0	0.0	0.0	0.0	4
9	2	0.9	0.0	0.0	4
11	0	0.0	0.0	0.0	4
16	0	0.0	0.0	0.0	4
19	0	0.0	0.0	0.0	4

	登録			>=2	
				>=1	
Middle	760			>=0.5	
Area	number	incidence	5y survival	EI	
100L	1	0.1	0.0	0.0	4
100R	1	0.1	100.0	0.1	4
101L	45	5.9	32.8	1.9	2
101R	70	9.2	26.6	2.5	2
102midL	10	1.3	10.0	0.1	4
102midR	13	1.7	18.5	0.3	4
102upL	3	0.4	0.0	0.0	4
102upR	2	0.3	0.0	0.0	4
103	1	0.1	100.0	0.1	4
104L	52	6.8	15.7	1.1	3
104R	69	9.1	22.4	2.0	3
105	39	5.1	10.9	0.6	2
106pre	1	0.1	0.0	0.0	4
106recL	107	14.1	28.9	4.1	1
106recR	170	22.4	37.2	8.3	1
106tbL	21	2.8	30.3	0.8	2
106tbR	1	0.1	0.0	0.0	4
107	69	9.1	19.9	1.8	2
108	93	12.2	25.3	3.1	1
109L	22	2.9	22.0	0.6	2
109R	24	3.2	28.6	0.9	2
110	69	9.1	34.4	3.1	2
111	12	1.6	0.0	0.0	3
112	36	4.7	30.8	1.5	3
1	104	13.7	26.4	3.6	2
2	80	10.5	31.1	3.3	2
3	79	10.4	28.6	3.0	2
7	74	9.7	28.5	2.8	2
8	10	1.3	10.0	0.1	4
9	25	3.3	33.5	1.1	4
11	11	1.4	30.3	0.4	4
16	0	0.0	0.0	0.0	4
19	1	0.1	0.0	0.0	4

				>=2	
	登録			>=1	
Lower	326			>=0.5	
Area	number	incidence	5y survival	EI	
100L	0	0.0	0.0	0.0	4
100R	0	0.0	0.0	0.0	4
101L	20	6.1	13.4	0.8	3
101R	15	4.6	20.7	1.0	3
102midL	2	0.6	0.0	0.0	4
102midR	5	1.5	0.0	0.0	4
102upL	0	0.0	0.0	0.0	4
102upR	1	0.3	0.0	0.0	4
103	0	0.0		0.0	4
104L	21	6.4	6.5	0.4	4
104R	12	3.7	15.0	0.6	4
105	11	3.4	18.2	0.6	3
106pre	0	0.0	0.0	0.0	4
106recL	25	7.7	25.2	1.9	2
106recR	46	14.1	21.9	3.1	2
106tbL	8	2.5	0.0	0.0	3
106tbR	0	0.0	0.0	0.0	4
107	21	6.4	13.2	0.9	2
108	40	12.3	29.0	3.6	2
109L	10	3.1	0.0	0.0	2
109R	10	3.1	10.0	0.3	2
110	57	17.5	23.9	4.2	1
111	12	3.7	8.3	0.3	2
112	22	6.7	26.3	1.8	2
1	92	28.2	30.1	8.5	1
2	79	24.2	28.9	7.0	1
3	70	21.5	21.1	4.5	2
7	82	25.2	23.4	5.9	2
8	14	4.3	0.0	0.0	4
9	21	6.4	33.3	2.1	3
11	11	3.4	22.7	0.8	4
16	3	0.9	0.0	0.0	4
19	0	0.0	0.0	0.0	3

臓器別がん登録-II

日本乳癌学会　全国乳がん登録の現状

国立がん研究センター中央病院
乳腺外科
木下　貴之

平成25年度　沼崎班全体会議

全国乳がん登録の役割

本邦における乳がん治療の現況を把握し、その診断・治療・予後・疫学等を検討することにより、乳がんの発生及び治療成績についての統計から乳がん発生の要因をさぐり、治療成績の向上や治療の均てん化をはかることを目的とする。

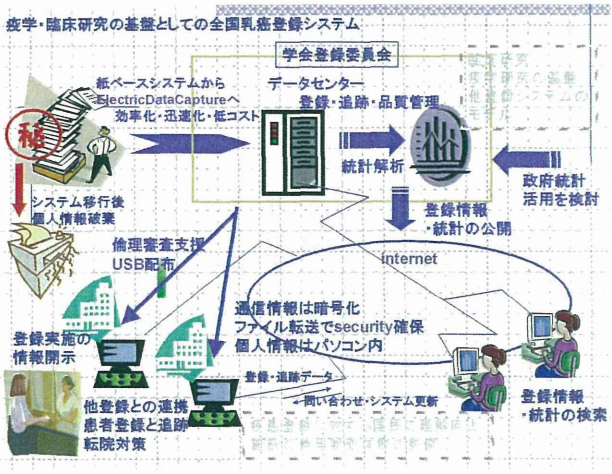
日本乳癌学会による全国乳がん登録システムの変遷

- 1975年 乳癌研究会の事業として全国登録を開始
- 1992年 日本乳癌学会の発足、がん登録事業も移行
- 2003年次 13,150症例の登録
  29年間で188,265症例(すべて紙ベース)し終了
- 2004年、個人情報保護法施行のため登録及び予後調査休止
  2004年11月より、新システムの開発に着手(NPO 日本臨床研究支援ユニットや財団法人パブリックヘルスリサーチセンターの協力を得る)
- 2005年9月 Web登録による連結可能匿名化した新システムに移行
  2004年次症例よりWeb登録システムでの登録開始
- 2010年:登録数48,156例、 施設数750施設
- 2011年:認定施設、関連施設の必須条件、外科学会にてNCD登録の開始
- 2013年1月25日現在
  - 参加施設数925施設、 新システムでの総登録例数:252,922例
  - 既登録施設579施設
  - 登録施設には、乳癌学会の認定、関連施設ではない施設も含まれている
- 2012年:乳癌登録のNCDへの移行
  - 5年ごとの予後解析
  - 専門医制度との連動
- 2013年1月25日現在
  - 参加施設数925施設、 新システムでの総登録例数:252,922例
  - 既登録施設579施設
  - 登録施設には、乳癌学会の認定、関連施設ではない施設も含まれている

登録実績

2005年12月　アンケート調査結果

参加施設数	356 施設
年間登録予定症例数	27,952 症例



前Webシステムの概略

- 施設登録申し込み:メールでデータセンターに施設登録申し込み。(施設名・郵便番号・住所・診療科名・責任医師名・責任医師のメールアドレス)
- Shuttleの送付:登録・管理システム(データ管理、独自のメール送受信ソフト、暗号化機能が設定)と申し込みの内容が設定。
- 管理用のPCとShuttleによるセットアップ。
- Shuttleを接続した管理用PCからデータ入力、データセンター宛に専用メールでデータ送信。(データは全て暗号化、システムへのアクセスはIDとパスワードで保護される。)
- 不備がある場合は再調査、システム更新の依頼をメールで受ける。(修正後に再送信)

乳がん登録　前Webシステムについて①

- 登録対象と登録項目
  ①登録施設において何らかの治療（手術・薬物療法・放射線治療など）が行なわれた乳癌患者。検査のみの症例は登録不可。（男性患者の登録可）

  ②入力項目は31項目、データセンターへは施設患者番号と患者氏名の2項目を除いた29項目がデータセンターへ転送。

- 2004年の症例から登録開始（毎年の症例登録）。
  症例登録データの送付は、治療開始の2年後の12月末。（例えば2004年の症例は2006年末にデータを送付）

乳がん登録　前Webシステムについて②

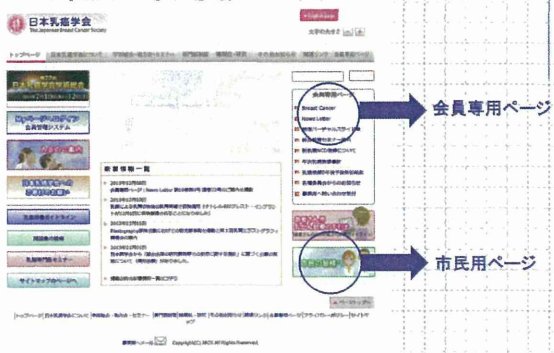
- 匿名化の方法：連結可能匿名化
- USBデバイス（Shuttle）を用い、インターネット環境をそのまま利用
- 予後調査の方法と頻度：2004年からこの制度が開始のため、予後調査は2009年末日より開始予定（5年以上経過時点で別途予後調査）。

乳がん登録システムについて③

- 登録の規模：日本全国の851施設（2012年2月6日現在）。
- 登録データの公表方法：
  主要項目の集計結果を施設名とともに日本乳癌学会のホームページで公開（ http://www.jbcs.gr.jp/ ）。
- 登録データの実地臨床への還元方法：
  ・医師に対して：登録施設における生存率などをデーターセンターから取得できる。（会員はパスワードで閲覧可能）

  ・国民に対して：マスコミなどによるアンケートからの評価でなく、全国登録による正確なデータでの対応が可能となり、国民が求めている情報開示につながる。（データの一部を閲覧可能）

日本乳癌学会のホームページにてがん登録情報を公開
（ http://www.jbcs.gr.jp/ ）



新システム移行後の登録状況

年度	登録症例数	参加施設数
2004	15,596	278
2005	20,227	307
2006	21,294	300
2007	23,637	328
2008	30,441	457
2009	40,817	626
2010	48,156	925

Note: The occurrence of breast cancer in both breasts of one patient is calculated as 2 cases.

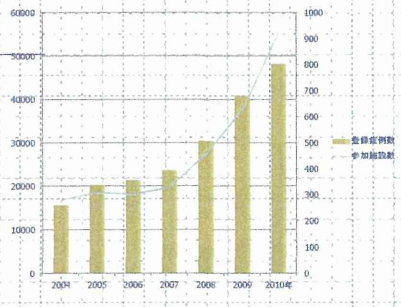
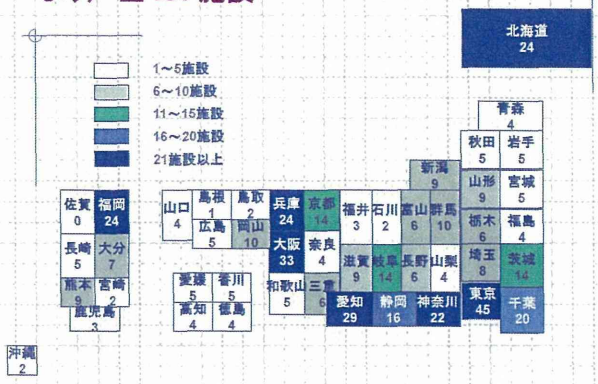


図. 新システム移行後の年次別登録症例数と参加施設数
（日本乳癌学会全国乳がん患者登録調査報告：2004～2010年）

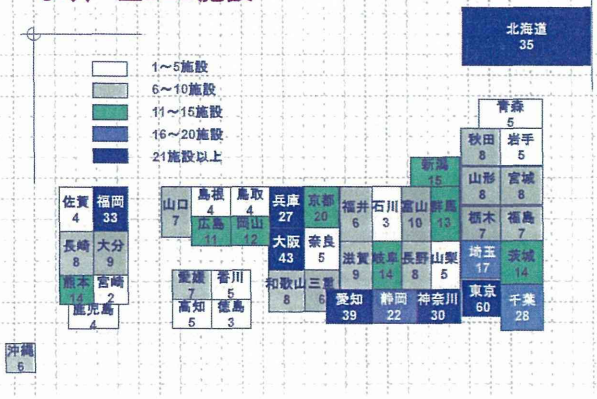
日本乳癌学会全国乳がん登録症例数

「地域がん登録全国推計値」の罹患データより算出

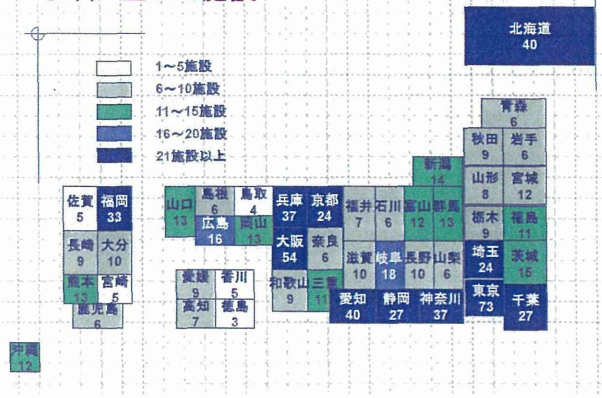
全国乳がん登録参加施設（2008年確定版より） 全457施設



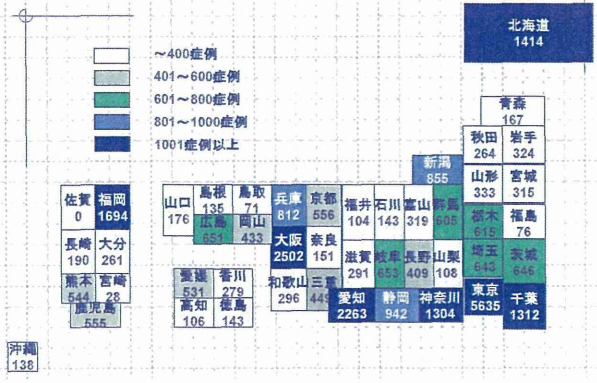
全国乳がん登録参加施設（2009年確定版より） 全925施設



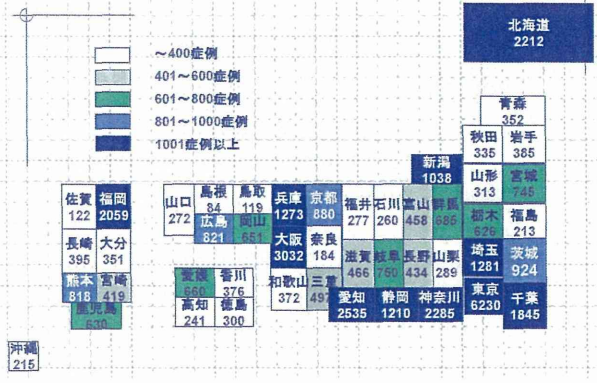
全国乳がん登録参加施設（2010年確定版より） 全626施設



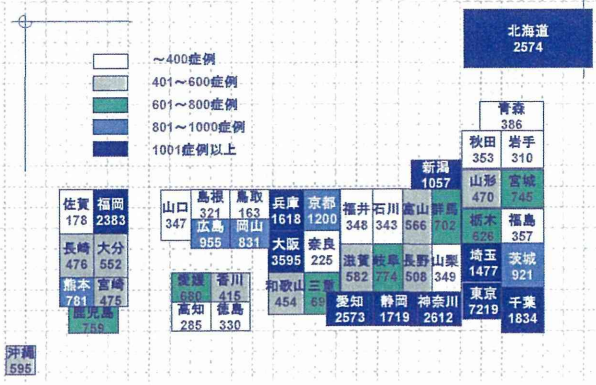
都道府県別乳がん登録数（2008年度確定版より） 合計 30,441



都道府県別乳がん登録数（2009年度確定版より） 合計 40,817



都道府県別乳がん登録数(2010年度確定版より) 合計 48,156



2010年度 日本乳癌学会全国登録報告書

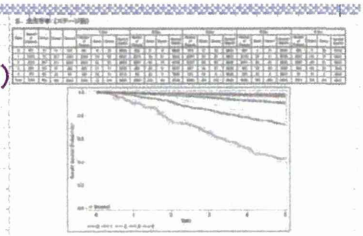
登録症例数(1975年~) 188、265例
参加施設 851施設
新規登録システム導入後累計(2004年~)
252、922例

現在は2010年度症例の確定版が完成。
2011年度症例の暫定版を作成中。
2011年度より2005年度予後調査が開始された。

2004年次乳癌登録予後解析結果

- 登録施設数 227施設
- 登録症例数 14,805例
- 予後調査協力施設 126施設
- 予後調査登録症例数 7,241例(48.9%)
- 2012年6月4日 改訂版をホームページに掲載

予後(2004年次症例)



Stage	No. of Pts.	Event	Censor	5 year Survival Rate (%)
0	451	10	71	97.58%
1	2,389	75	317	96.63%
2	2,938	247	371	90.93%
3	642	163	91	72.48%
4	190	96	28	42.65%
Total	7,233	639	962	90.47%

乳癌登録の現状

- 旧Webシステムの予後調査の継続
- 参加施設の拡大
  →平成23年よりがん登録が日本乳癌学会認定施設・関連施設の必須項目になった。
- 2012年より乳癌登録をNCDへ完全移行した→専門医制度との紐付け
- 予後データ付き登録データの利用申請審査制度が開始(最終決済は理事長)
- 多施設から集まる多くの登録データの精度管理が急務→ 誰がやる?システムで解決できるか?

がん登録と乳腺専門医との位置づけ

乳腺専門医の申請資格
基本的領域診療科の認定医または専門医
5年毎の更新

認定・更新要件
- 診療実績として症例報告の義務付け
- 診療実績 100例
- 基盤学会が外科の場合, NCD登録データの活用により更新可能
- 基盤学会が外科以外の場合
  - 薬物療法のみの症例もNCD登録する方針
  - NCD登録データが利用できるか検討