Introducing the Japanese breast cancer registry and the activity

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A History of Breast Cancer Registry in JBCS

in 1975, Breast Cancer Registry (BCR) launched
in 2003, started Web-based registration System
in 2012, combined with the National Clinical Database (NCD)

Total Number of Registration

1975-2003  188,265 cases
2004-2014  480,588 cases

[Bar chart showing the number of registrations from 2004 to 2014]
Ethics (NCD project in Japan)

• NCD project approved by IRB in Tokyo University

• A right of patients to reject registration to NCD

• Strictly protected NCD-BCR data and not released row data from NCD datacenter.
Clinicopathological characteristics of breast cancer and trends in the management of breast cancer patients in Japan: Based on the Breast Cancer Registry of the Japanese Breast Cancer Society between 2004 and 2011

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Fig. 1 Population-adjusted age distribution of breast cancer patients between 2004 and 2011 in Japan
The trend of surgical procedure in Japan

Fig. 5 Percentages of annual rates of breast cancer patients according to surgical procedures for breast tumors between 2004 and 2011 in Japan.

Fig. 6 Percentages of annual rates of breast cancer patients according to surgical procedures for axillary lymph nodes between 2004 and 2011 in Japan. ALND axillary lymph node dissection, SLNB sentinel lymph node biopsy.
Periodical reports

Comprehensive prognostic report of the Japanese Breast Cancer Society registry in 2006

Takayuki Iwamot
Naoki Niikura
Kenjiro Aogi
Kotaro Iijima

Comprehensive prognostic report of the Japanese Breast Cancer Society Registry in 2005

Keisei Anan
Naoki Niikura
Kenjiro Aogi
Kotaro Iijima

Comprehensive prognostic report of the Japanese Breast Cancer Society Registry in 2004

Takayuki Kinoshita
Naohito Fukui
Keisei Anan
Takayuki Iwamoto
Naoki Niikura
Masaaki Kawai
Naoki Hayashi
Kouichiro Tsugawa
Kenjiro Aogi
Takanori Ishida
Hideji Masuoka
Shinobu Masuda
Kotaro Iijima
Seigo Nakamura
Yutaka Tokuda
For ER-negative/HER2-positive patients, DFS improved from 85.0% in 2004 to 90.9% in 2006, and OS from 85.02 to 89.88%, respectively.
Annually been invited
Large retrospective studies using the database

with over 50 demographic and clinicopathological factors of newly-diagnosed primary breast cancer patients
4 papers were published using the big data in 2016.
1. young age at onset was an independent negative prognostic factor.

*Figure* shows the disease-free survival with (A) HER2-negative/ER-positive, (B) HER2-positive/ER-positive, (C) HER2-positive/ER-negative, and (D) triple receptor negative breast cancer. *P*-values were calculated using a log-rank test.
2. low-risk tumors account for a substantial proportion of clinical screening-detected cancers.

Fig. 3 Density plots for age frequency distribution at diagnosis, by detection mode. Density plots show the age frequency distribution at diagnosis, according to detection mode, in a all breast cancers, b DCIS, c ER+ tumors, and d ER- tumors between 2004 and 2011. DCIS ductal carcinoma in situ; ER estrogen receptor.
3. being obese or underweight is associated with a higher risk of death in Japan.

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</table>

*Adjusted by age, living place, detection method, family history of breast cancer, tumor stage, radiation therapy, chemotherapy, endocrine therapy, menopausal status, and registered year. HR, hazard ratio; CI, confidence interval; BMI, body mass index.*

4. Loss of HER2-positivity could occur after neoadjuvant treatment and strongly supported the need for retest biomarker status on surgical sample.

From: Changes in tumor expression of HER2 and hormone receptors status after neoadjuvant chemotherapy in 21,755 patients from the Japanese breast cancer registry.

Rates of pathologic complete in response by (A) subtype (HER2-positive, luminal, triple-negative), (B) ER status (for HER2-positive tumors), and (C) treatment with trastuzumab as neoadjuvant therapy (HER2-positive tumors).

Conclusions

Not only for the clinical studies, this database system would be useful for quality indicator analysis and improvement of diagnosis and treatment guideline.

Continuous effort of higher rate and the accuracy of patients data registration will contribute to improve treatment and patients’ prognosis.
Acknowledgement

We thank to all patients and medical staff in Japan.

Registration Committee
Scientific Committee
Ethics Committee