TUBERCULOSIS ANNUAL REPORT 2008

Series 10. Treatment Outcome and TB Deaths
Tuberculosis Surveillance Center, RIT, JATA

Abstract   Evaluation of the outcome of treatment by the cohort analysis method is an important aspect of TB control.   In the Japanese tuberculosis (TB) surveillance system, the outcome of treatment is automatically classified by computer according to the order of pre-set algorithm, so the treatment outcome is evaluated very rigidly. Although treatment outcomes are classified roughly into the eight categories of   "cured", "completed", "died", "failed", "defaulted", "transferred", "still on treatment" and "not evaluated", there are actually 15 categories in our surveillance system; each category of "completed", "defaulted", and" still on treatment" has two subcategories and "not evaluated" has five subcategories. In the case of new sputum smear positive pulmonary cases (n＝9,421) newly notified in 2007, their treatment outcome was as follows; "success" which combined "cured" and" completed" was 45.5%,"died" was 18.4%,"failed" was 1.0%, "defaulted" was 5.0%, "transferred" was 3.2%,"still on treatment" was 12.0%and "not evaluated" was 14.9%.
Among the 5.0%who were classified as"defaulted", 0.7% was due to treatment interruption for more than consecutive 60 days or 2 months, and 4.3%was due to premature treatment cessation of any causes. The category "not evaluated" includes those who died before beginning treatment, those whose initial treatment regimen is unknown, those whose treatment is other than standard treatment, those who stopped INH and/or RFP before treatment completion, and those whose information is insufficient for classifying treatment outcome.
   In addition to evaluation of treatment outcome by the cohort method, the proportion of deaths was observed among all forms of TB patients (n＝25,184) and new sputum smear positive pulmonary patients (n＝9,421) who were newly registered in 2007. 16.4%of all forms of TB cases and 22.5%of new sputum smear positive pulmonary cases died within one year after beginning of treatment. Among new sputum smear positive pulmonary patients died within one year after beginning of treatment (n＝2,124), 36.2%of them died within one month after beginning of treatment, 52.4%within two months, 61.9%within three months.

Correspondence to：Tuberculosis Surveillance Center, Research Institute of Tuberculosis, JATA, 3-1-24, Matsuyama, Kiyose-shi, Tokyo 204-8533 Japan.
(E-mail：tbsur@jata.or.jp)

Table 1 Treatment outcome of newly notified pulmonary TB patients in 2007 by patient classification based on the cohort method

| | Sputum smear pos. | | | | Other bacillary pos. | | Bacillary neg. | |
	New		Retreatment					
New cases in 2007	9,421	(100%)	783	(100%)	6,010	(100%)	3,606	(100%)
Success	4,291	45.5	292	37.3	2,970	49.4	1,800	49.9
Cured	1,589	16.9	137	17.5	563	9.4	265	7.3
Completed 1	2,344	24.9	141	18.0	1,628	27.1	1,525	42.3
Completed 2	358	3.8	14	1.8	779	13.0	10	0.3
Died	1,729	18.4	128	16.3	601	10.0	229	6.4
Failed	93	1.0	17	2.2	39	0.6	4	0.1
Defaulted	474	5.0	44	5.6	791	13.2	619	17.2
Defaulted 1	68	0.7	11	1.4	50	0.8	38	1.1
Defaulted 2	406	4.3	33	4.2	741	12.3	581	16.1
Transferred out	297	3.2	11	1.4	113	1.9	78	2.2
On treatment	1,130	12.0	128	16.3	560	9.3	244	6.8
On Tx 1	160	1.7	20	2.6	67	1.1	19	0.5
On Tx 2	970	10.3	108	13.8	493	8.2	225	6.2
Not evaluated*	1,407	14.9	163	20.8	936	15.6	632	17.5
Not eval. 1	183	1.9	11	1.4	153	2.5	74	2.1
Not eval. 2	401	4.3	27	3.4	170	2.8	95	2.6
Not eval. 3	239	2.5	58	7.4	136	2.3	118	3.3
Not eval. 4	105	1.1	10	1.3	69	1.1	23	0.6
Not eval. 5	479	5.1	57	7.3	408	6.8	322	8.9

*: including those who died before beginning treatment, those whose initial treatment regimen is unknown, those whose treatment is other than standard treatment, those who stopped INH and/or RFP before treatment completion, and those whose information is insufficient for classifying treatment outcome
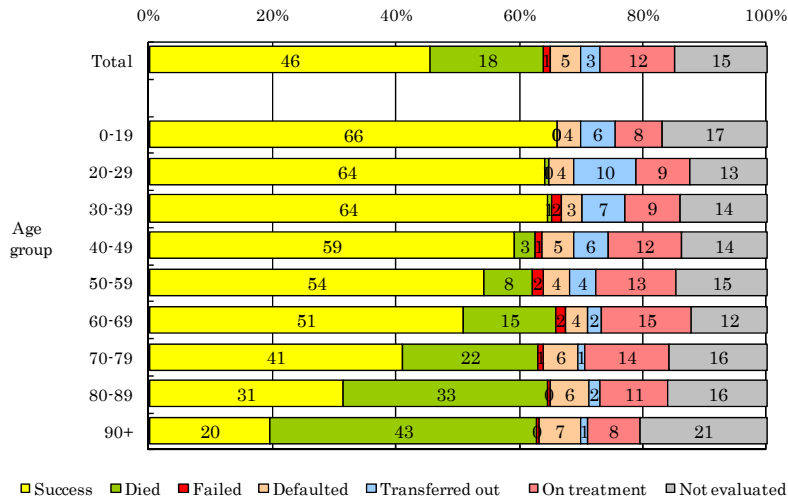

Fig.1 Treatment outcome of newly notified new sputum smear positive pulmonary TB patients in 2007 by age group based on the cohort method

Table 2 Number (proportion) of cases cancelled from TB registration among newly notified TB patients and LTBI cases in 2007 by the end of 2008

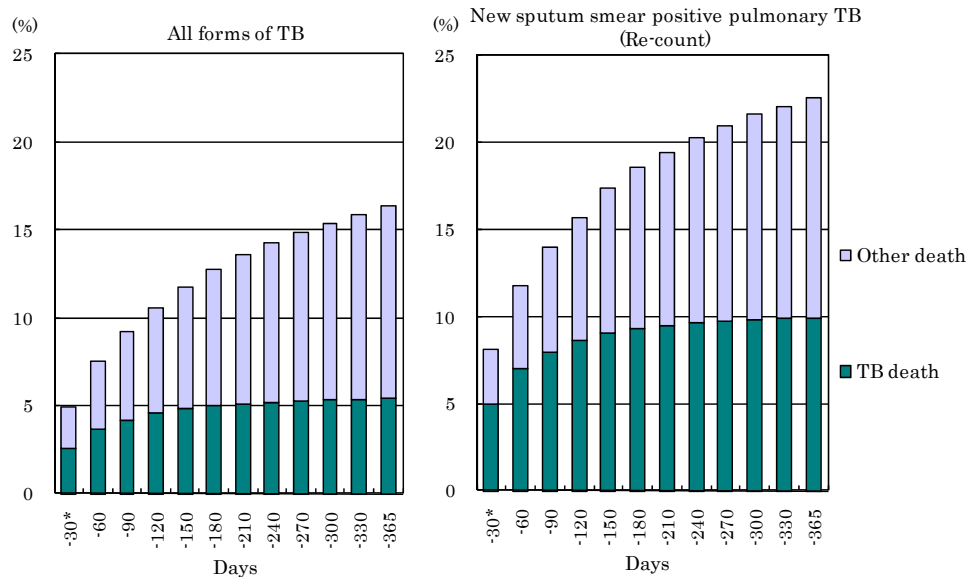| | Newly notified TB patients | | | | | | LTBI(Not included in the total) |
| | | Pulmonary TB | | | | | |
| | Total | Sputum smear pos. | | Other bacillary pos. | Bacillary neg. | Extra-pulmonary | |
		New	Retreatment				
New cases in 2007	25,184	9,421	783	6,010	3,606	5,364	2,942
Total of cancellation	7,953	3,196	241	1,543	1,066	1,907	1,385
No need for follow-up	1,520	80	12	232	439	757	1,205
Died	5,006	2,480	183	980	408	955	5
TB death	1,482	998	74	158	67	185	0
Other death	3,524	1,482	109	822	341	770	5
Transferred out	1,012	481	22	227	145	137	109
Retreatment during registration	201	84	18	54	24	21	5
Other reason	214	71	6	50	50	37	61
Total of cancellation	31.6 %	33.9 %	30.8 %	25.7 %	29.6 %	35.6 %	47.1 %
No need for follow-up	6.0	0.8	1.5	3.9	12.2	14.1	41.0
Died	19.9	26.3	23.4	16.3	11.3	17.8	0.2
TB death	5.9	10.6	9.5	2.6	1.9	3.4	0.0
Other death	14.0	15.7	13.9	13.7	9.5	14.4	0.2
Transferred out	4.0	5.1	2.8	3.8	4.0	2.6	3.7
Retreatment during registration	0.8	0.9	2.3	0.9	0.7	0.4	0.2
Other reason	0.8	0.8	0.8	0.8	1.4	0.7	2.1

Fig.2 Cumulative proportion of deaths among newly notified TB patients in 2007 by period from the beginning of treatment

-30*: including cases who died before the beginning of treatment

3