

Tuberculosis Annual Report 2008
Series 8. Treatment of TB(1)

Tuberculosis Surveillance Center, RIT, JATA

Abstract The standard treatment of tuberculosis (TB) is the key to its control. Here we report on the statistics of treatment history and initial regimen for treating TB in 2008.

The frequency of retreatment among newly notified TB patients might be partly a indicator of previous insufficient treatment. In 2008, 24,760 TB patients were newly notified. Of those, 1,836 cases were reported as having had previous treatment and 424 cases were reported as unknown treatment history. The proportion of retreatment was 7.5%, excluding those of unknown treatment history. The proportion of retreatment among newly notified TB patients increased with age from their 20s (4.0%) to their 70s (9.4%).

Regarding the year of previous treatment, the number of cases having received previous treatment in 2007 was the most cases (n=187). The total number of cases whose previous treatment had begun in 2007 or 2008 was 220, i.e. 12.0% of all retreatment cases in 2008. On the other hand, the number of cases having received previous treatment in 1950s was also significant (n=234, 12.7%).

As initial treatment regimen, the combination of INH, RFP, PZA + EB/SM is recommended by Japanese Society for Tuberculosis. This regimen was initially used in 79.1% of all forms of TB patients aged 15_ 79 years old, excluding those cases whose treatment regimen was unknown.

The data on duration of having actually received PZA was adopted to add to the central TB surveillance database from 2007. The number of cases who started TB treatment including PZA in 2007 was 15,282. Of those, 11,817 cases had completed TB treatment by the end of 2008, but 8.4% of them could not take PZA fully for 2 months.

Key words : Tuberculosis, Age, Treatment history, New treatment, Retreatment, Regimen, PZA

Research Institute of Tuberculosis, JATA

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)

表1 新登録結核患者の年齢階層別治療歴別患者数、2008年
 Table 1 Number of TB patients by treatment history and age group, 2008

年齢 Age group	新登録患者 Newly notified TB patients	治療歴 Treatment history			再治療(%) Retreatment(%)
		初回 New	再治療 Retreatment	不明 Unknown	
総数 Total	24,760	22,500	1,836	424	7.5
0-4	41	39	2	-	4.9
5-9	23	23	-	-	0.0
10-14	31	30	1	-	3.2
15-19	191	181	10	-	5.2
20-24	750	710	37	3	5.0
25-29	1,073	1,025	36	12	3.4
30-34	1,082	1,028	46	8	4.3
35-39	1,070	1,007	55	8	5.2
40-44	1,010	951	49	10	4.9
45-49	907	852	50	5	5.5
50-54	1,102	1,018	73	11	6.7
55-59	1,682	1,545	121	16	7.3
60-64	1,754	1,573	157	24	9.1
65-69	1,935	1,741	163	31	8.6
70-74	2,485	2,213	233	39	9.5
75-79	3,039	2,697	274	68	9.2
80-84	3,226	2,861	279	86	8.9
85-89	2,209	1,955	185	69	8.6
90+	1,150	1,051	65	34	5.8

再治療(%): 治療歴不明を除く

Proportion of retreatment : Excluding those of unknown treatment history

表2 再治療者の年齢階層別前回治療内容別患者数、2008年

Table 2 Number of TB patients treated previously by previous TB treatment regimen and age group, 2008

年齢 Age group	再治療者 Retreatment	前回治療内容 Previous treatment regimen					不明* Unknown*
		HRZ含む治 療 Regimen including HRZ	他HR含む 治療 Other regimen including HR	その他治 療 Other regimen	潜在性結 核治療 LTBI treatment		
総数 Total	1,836	498	399	273	52	614	
0-4	2	-	-	-	2	-	
5-9	-	-	-	-	-	-	
10-14	1	-	-	-	1	-	
15-19	10	2	1	-	7	-	
20-24	37	17	3	-	13	4	
25-29	36	19	5	-	7	5	
30-34	46	20	11	3	8	4	
35-39	55	25	14	2	4	10	
40-44	49	18	16	2	2	11	
45-49	50	23	9	4	-	14	
50-54	73	36	18	5	1	13	
55-59	121	50	28	11	1	31	
60-64	157	59	34	13	1	50	
65-69	163	52	29	30	-	52	
70-74	233	67	48	46	2	70	
75-79	274	42	66	64	-	102	
80-84	279	46	54	56	1	122	
85-89	185	19	44	28	1	93	
90+	65	3	19	9	1	33	

*: 化療なし25名を含む

*: Including 25 cases who were reported as having had no treatment with antituberculosis drugs

表3 再治療者の年齢階層別前回治療開始年別患者数、2008年
 Table 3 Number of retreated TB patients by previous treatment year and age group, 2008

年 Year	総計 Total	年齢(歳) Age group (yrs)								(再)前回治療 内容不明 (Re-count)*
		0-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	
総計 Total	1,836	13	73	101	99	194	320	507	529	614
~1949	154	-	-	-	-	-	5	34	115	107
1950-59	234	-	-	-	-	7	24	117	86	127
1960-69	127	-	-	-	3	8	39	44	33	70
1970-79	78	-	-	3	5	15	19	21	15	38
1980-89	100	-	-	1	9	17	19	22	31	64
1990-99	199	3	7	23	21	29	39	47	30	40
2000-08	820	10	63	73	59	114	161	178	162	65
不明 Unknown	124	-	2	1	2	4	14	44	57	109
(再掲)2000~2008年		(Re-count) 2000-2008								
2000	43	2	2	4	2	5	7	15	6	5
2001	53	-	2	6	4	9	11	9	12	6
2002	67	-	6	6	3	14	17	13	8	7
2003	74	-	3	10	6	9	15	21	10	7
2004	82	-	5	6	11	11	15	17	17	4
2005	109	1	7	10	8	9	24	21	29	5
2006	172	1	15	17	11	24	28	37	39	13
2007	187	2	17	10	12	30	38	39	39	10
2008	33	4	6	4	2	3	6	6	2	2

*(Re-count) Unknown previous treatment regimen

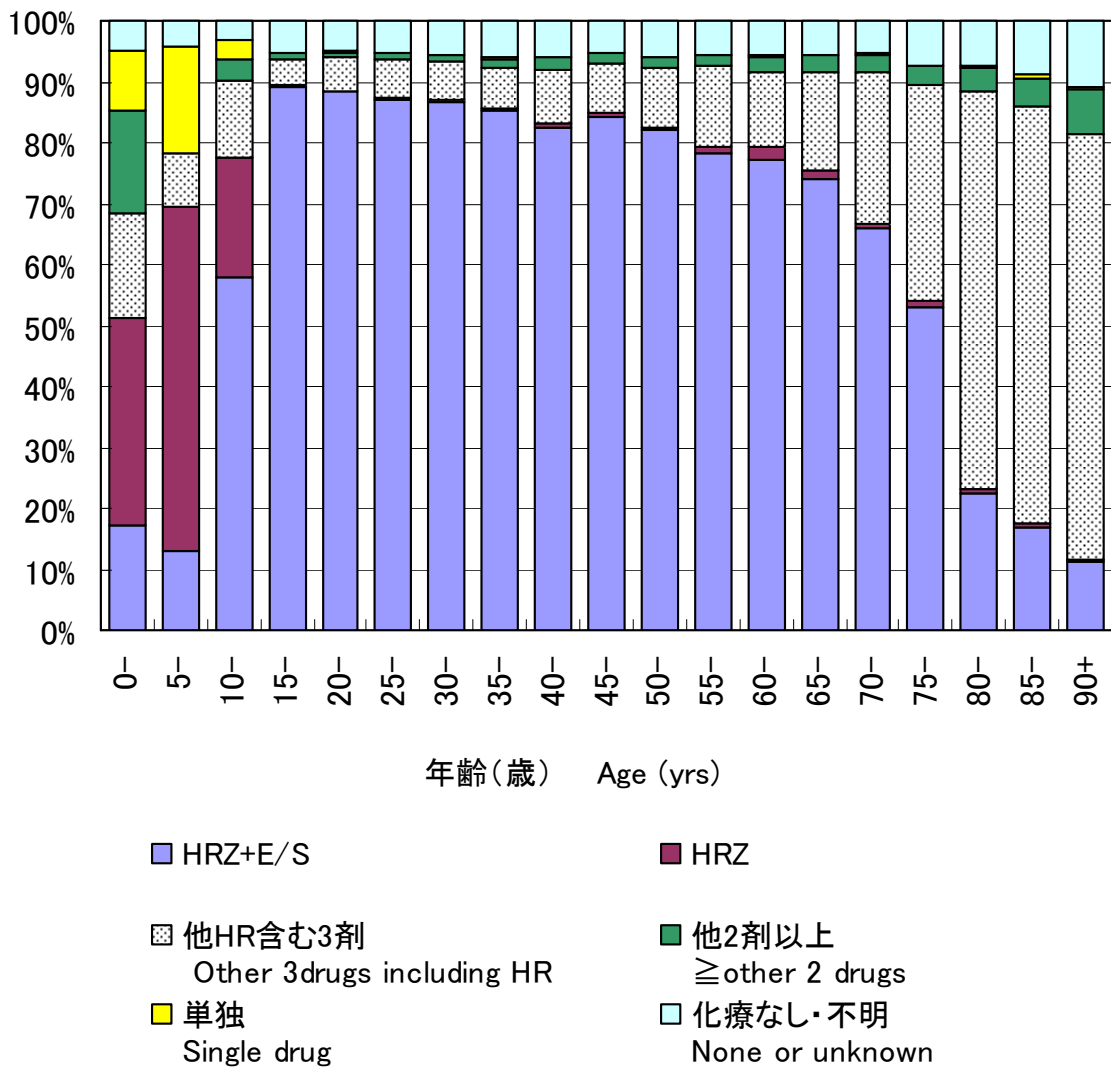


図 新登録結核患者の年齢階層別治療開始時治療内容、2008年
 Fig. Initial treatment regimen of newly notified TB patients by age group, 2008

表4 治療開始時PZA使用者の使用継続状況、治療完遂の有無別、2007年新登録患者

Table 4 Outcome of treatment with PZA in initial phase among newly notified TB patients in 2007 by completion of regimen

		総計 Total	完遂 Completed	その他 Others
総計	Total	15,282	11,817	3,465
2か月	2 months	10,999 (90.3)	10,579 (91.6)	420 (66.2)
1月以上2月未満 ≥1 month and <2 months		548 (4.5)	469 (4.1)	79 (12.5)
1月未満	<1 month	631 (5.2)	496 (4.3)	135 (21.3)
不明	Unknown	3,104 (-)	273 (-)	2,831 (-)
(%) 不明を除く割合		Excluding unknown		

TUBERCULOSIS ANNUAL REPORT 2008

Series 9. Treatment of TB (2)

Tuberculosis Surveillance Center, RIT, JATA

Abstract The standard treatment for tuberculosis (TB) is the key to its control. Here we report on the statistics of treatment status and the duration of hospitalization/treatment.

The place of initial treatment was observed among newly notified TB patients (n=24,760) in 2008. Of those, the proportion receiving treatment in hospital among sputum smear positive pulmonary TB patients was the most (91.7%), including 2.1% hospitalized mainly due to other diseases. The proportion receiving treatment in hospital among bacteriologically negative pulmonary TB cases was the least (25.8%), including 10.3% hospitalized mainly due to other diseases. This proportion of patients receiving treatment in hospital did not differ with age, among sputum smear positive pulmonary TB cases. But, this proportion differed greatly in their age groups (e.g. 9.9% in their 20s, 25.7% in their 50s and 50.0% in their 80s), among bacteriologically negative pulmonary TB cases.

The duration of hospitalization for TB treatment among newly notified cases in 2007 was observed at the end of 2008. The median hospitalization periods were 69 days, 74 days, 45 days, 38 days and 45 days, among new sputum smear positive pulmonary TB cases, retreatment sputum smear positive pulmonary TB cases, other bacillary positive pulmonary TB cases, bacilli negative pulmonary TB cases and extra-pulmonary TB cases, respectively.

The duration of TB treatment among newly notified cases in 2007 was observed at the end of 2008. The median treatment duration among all forms of TB was 273 days. The longest median treatment duration was 298 days for retreatment sputum smear positive pulmonary TB cases and the shortest was 204 days for bacteriologically negative pulmonary TB cases.

Key words : Tuberculosis, Age, Treatment status, Duration of hospitalization, Duration of treatment, INH, RFP

Research Institute of Tuberculosis, JATA

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)

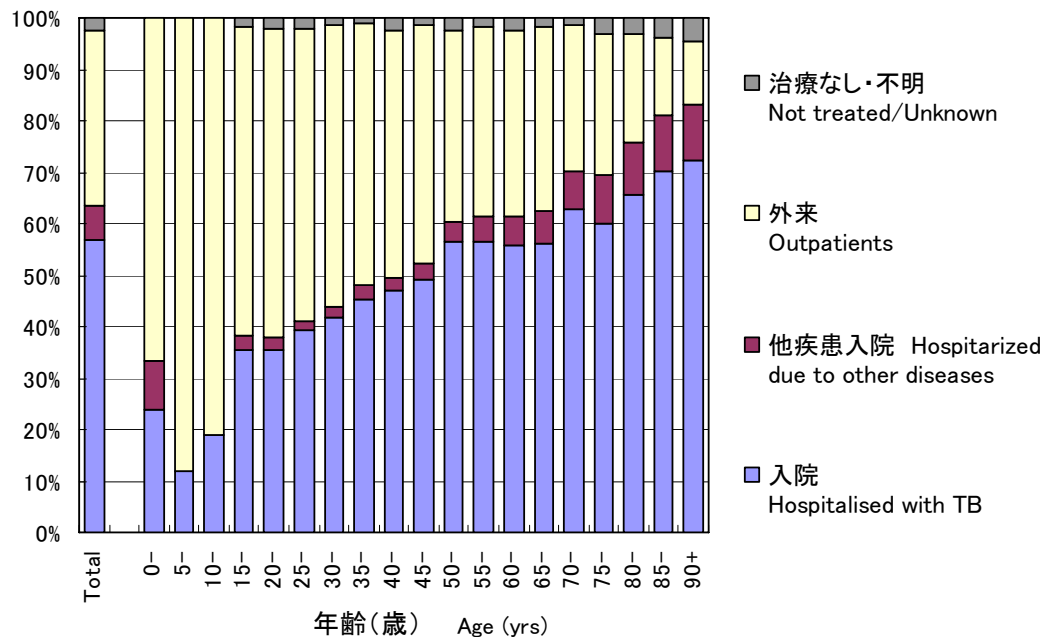


図1 新登録肺結核患者の治療開始時受療状況別割合、年齢階層別、2008年
 Figure 1 Proportion of initial treatment status among newly notified pulmonary TB patients by age group, 2008

表1 年齢階層別治療開始時入院あるいは他疾患入院の割合(%)、総合患者分類別、2008年新登録結核患者

Table 1 Proportion (%) hospitalized among newly notified TB patients in 2008 by age group and patient classification

年齢 Age	肺結核 Pulmonary TB								肺外結核 Extra-pulmonary	
	計 Total		喀痰塗抹陽性 Sputum smear pos.		他結核菌陽性 Other bacillary pos.		菌陰性結核 Bacillary neg.		入院 Ht	他入院 Ho
	入院 Ht	他入院 Ho	入院 Ht	他入院 Ho	入院 Ht	他入院 Ho	入院 Ht	他入院 Ho		
総数 Total	56.8	6.5	89.6	2.1	27.7	11.5	15.5	10.3	31.9	19.5
0-19	31.2	3.0	91.4	0.0	22.5	2.8	3.8	4.8	19.2	7.7
20-29	37.8	2.1	89.5	0.6	20.6	3.2	7.7	2.2	22.9	12.0
30-39	43.5	2.5	87.9	0.7	19.0	4.2	8.1	3.0	29.0	8.1
40-49	48.0	2.7	87.8	1.1	19.4	4.2	9.9	4.0	22.9	12.7
50-59	56.6	4.5	88.6	1.5	22.4	7.6	17.2	8.5	25.4	15.3
60-69	56.0	6.0	89.6	1.4	23.9	10.0	19.0	11.5	25.0	20.0
70-79	61.3	8.4	88.9	3.3	30.4	14.1	20.8	16.0	33.1	21.2
80-89	67.6	10.3	91.5	2.6	36.7	20.1	25.6	24.4	39.8	24.0
90+	72.4	10.8	91.4	2.1	47.7	21.9	30.8	30.8	45.9	27.8

入院: 結核を主たる理由に入院 Ht: Hospitalized with TB

他入院: 結核以外の他疾患の治療を主たる理由に入院 Ho: Hospitalized mainly due to other diseases

表2 治療開始時入院治療者の治療期間、総合患者分類別、2007年新登録結核患者

Table 2 Duration of hospitalization among newly notified TB patients receiving initial treatment at hospital in 2007 by patient classification

		新登録活動性結核 Newly notified TB patients						
		肺結核 Pulmonary TB					肺外結核 Extra-pulmonary	
総数 Total	計 Total	喀痰塗抹陽性 Sputum smear pos.		他結核菌 陽性 Other bacillary pos.	菌陰性結 核 Bacillary neg.			
		初回治療 New	再治療 Retreatment					
総数 Total	25,184	19,820	9,421	783	6,010	3,606	5,364	
入院 Hospitalized with TB	13,364	11,400	8,427	701	1,617	655	1,964	
退院日入力 Known date of discharge	10,312	8,954	6,755	579	1,185	435	1,358	
入院患者で退院日が入力された者の入院期間 Duration of hospitalization among those hospitalized with TB and with known date of discharge								
中央値(日) Median (days)	63	65	69	74	45	38	45	
80%値(日) 80% percentile (days)	117	117	120	123	99	92	107	

*: 退院理由は問わず * Irrespective of the reason for discharge from hospital

表3 2007年新登録治療開始者の2008年末治療状況および治療期間、総合患者分類別

Table 3 Treatment status at the end of 2008 and duration of treatment among those newly notified and started TB treatment in 2007 by patient classification

		新登録活動性結核 Newly notified TB patients						
		肺結核 Pulmonary TB					肺外結核 Extra-pulmonary	
総数 Total	計 Total	喀痰塗抹陽性 Sputum smear pos.		他結核菌 陽性 Other bacillary pos.	菌陰性結 核 Bacillary neg.			
		初回治療 New	再治療 Retreatment					
総数 Total	25,184	19,820	9,421	783	6,010	3,606	5,364	
治療開始時入院/外来 Known treatment status	24,635	19,355	9,226	771	5,842	3,516	5,280	
治療終了 Stopped treatment	19,136	15,011	6,750	548	4,746	2,967	4,125	
治療終了(完遂) Completed	17,194	13,504	5,946	464	4,363	2,731	3,690	
治療中止(指示) Others	1,679	1,305	706	74	325	200	374	
自己中止 Defaulted	241	190	90	10	55	35	51	
不明 Unknown	22	12	8		3	1	10	
治療継続中* Still receiving treatment*	2,032	1,519	673	102	484	260	513	
治療中に除外 Cancelled from registration	3,467	2,825	1,803	121	612	289	642	
割合(%) Proportion(%)								
治療終了 Stopped treatment	77.7	77.6	73.2	71.1	81.2	84.4	78.1	
治療終了(完遂) Completed	69.8	69.8	64.4	60.2	74.7	77.7	69.9	
治療中止(指示) Others	6.8	6.7	7.7	9.6	5.6	5.7	7.1	
自己中止 Defaulted	1.0	1.0	1.0	1.3	0.9	1.0	1.0	
不明 Unknown	0.1	0.1	0.1	0.0	0.1	0.0	0.2	
治療継続中* Still receiving treatment*	8.2	7.8	7.3	13.2	8.3	7.4	9.7	
治療中に除外 Cancelled from registration	14.1	14.6	19.5	15.7	10.5	8.2	12.2	
治療完遂あるいは治療継続中*の治療期間 Median of duration of treatment among those completed treatment and still receiving treatment*								
対象者数 Completed or still receiving treatment	19,226	15,023	6,619	566	4,847	2,991	4,203	
中央値(日) Median (days)	273	271	278	298	241	204	276	

* 治療継続中: 2008年12月末時点で登録中かつ治療終了が未入力、よって治療期間は365日以上の可能性

* Still receiving treatment: No information on cancellation from registration and stopping treatment at the end of 2008, therefore the duration of treatment might be more than 365 days.

表4 治療開始時INHあるいはRFP使用者の使用継続状況、治療完遂の有無別、2007年新登録結核患者

Table 4 Outcome of treatment with INH or RFP in initial phase among those newly notified TB patients in 2007 by completion of standard regimen

	INHの使用 Treatment with INH			RFPの使用 Treatment with RFP		
	総数 Total	完遂 Completed	その他 Others	総計 Total	完遂 Completed	その他 Others
総数 Total	23,651	16,734	6,917	23,463	16,707	6,756
全期間中断なし Full course without interruption	16,022 (90.3)	15,340 (92.1)	682 (62.2)	16,112 (91.2)	15,476 (93.1)	636 (60.5)
一時中断あり Full course with interruption	1,096 (6.2)	891 (5.4)	205 (18.7)	1,120 (6.3)	928 (5.6)	192 (18.3)
中止後未使用 Interrupted and discontinued	629 (3.5)	420 (2.5)	209 (19.1)	434 (2.5)	211 (1.3)	223 (21.2)
不明 Unknown	5,904 (-)	83 (-)	5,821 (-)	5,797 (-)	92 (-)	5,705 (-)
(%) 不明を除く割合 Excluding unknown						