100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% Total 0-5-10-115-20-20-25-30-40-45-60-60-65-80-86-90+ Age (yrs) ■ HRZ+E/S ■ HRZ □ ≥ Other 3drugs including HR ■ Other drugs □ No treatment \blacksquare Unknown

Fig.1 Initial treatment regimen of newly notified tuberculosis patients by age group,

H: Isoniazid, R: Rifampicin, Z: Pyrazinamide, E: Ethambutol, S: Streptomycin

Table 1 Number of tuberculosis patients by treatment history and age group, 2011

			Treatment	t history			
	Newly		Re-tre	atment		Proportion of	
Age group	notified tuberculosis patients	New	Re-treatment, all	Re-treatment, past history of LTBI treatment (re-count)	Unknown	re-treatment tuberculosis patietns (%)	
Total	22,681	20,479	1,687	57	515	7.6	
0-4	33	31	2	2	0	6.1	
5-9	20	19	1	1	0	5.0	
10-14	31	30	1	1	0	3.2	
15-19	157	149	8	6	0	5.1	
20-24	631	601	26	5	4	4.1	
25-29	786	742	38	4	6	4.9	
30-34	827	777	43	5	7	5.2	
35-39	891	836	49	7	6	5.5	
40-44	961	908	46	5	7	4.8	
45-49	859	802	55	4	2	6.4	
50-54	914	847	55	4	12	6.1	
55-59	1,135	1,041	73	1	21	6.6	
60-64	1,680	1,523	136	5	21	8.2	
65-69	1,552	1,385	132	1	35	8.7	
70-74	2,014	1,824	156	5	34	7.9	
75-79	2,861	2,545	249	1	67	8.9	
80-84	3,305	2,879	304	0	122	9.6	
85-89	2,592	2,249	234	0	109	9.4	
90+	1,432	1,291	79	0	62	5.8	

Proportion of re-treatment tuberculosis patients: those of unknown treatment history excluded LTBI: Latent Tuberculosis Infection

Table 2 Number of retreatment tuberculosis patients by previous treatment year and age group, 2011

					Age gro	oup (yrs))			
Year	Total	0-19	20-29 30-39		40-49 50-59 6		60-69	70-79	80+	(Re-count)*
Total	1,687	12	64	92	101	128	268	405	617	603
~ 1949	129	0	0	0	0	0	3	17	109	90
1950-59	220	0	0	0	0	0	16	81	123	113
1960-69	106	0	0	0	0	0	26	42	38	50
1970-79	50	0	0	0	1	7	8	15	19	32
1980-89	61	0	0	1	5	6	17	22	10	37
1990-99	109	0	0	6	13	10	29	25	26	26
2000-11	766	12	59	82	76	92	134	142	169	49
Unknown	246	0	5	3	6	13	35	61	123	206
(Re-count) 200	0-2011									
2000	19	1	1	3	0	1	7	3	3	2
2001	26	0	1	2	4	6	4	4	5	2
2002	20	0	1	4	1	1	2	8	3	5
2003	24	0	2	7	0	1	3	6	5	4
2004	33	2	0	3	3	2	9	5	9	6
2005	48	1	1	4	2	10	7	8	15	6
2006	47	1	4	8	5	3	7	8	11	4
2007	70	0	2	7	6	8	13	16	18	2
2008	84	0	8	8	8	7	18	15	20	7
2009	162	1	12	14	16	15	32	30	42	1
2010	180	1	23	15	21	32	25	32	31	5
2011	53	5	4	7	10	6	7	7	7	5

^{*: (}Re-count) Unknown of previous treatment regimen

Table 3 Treatment with PZA in initial phase among newly notified tuberculosis patients in 2010 and completed standard treatment

	Total	Completed (%)
Total	14,418	11,556 (100)
2 months	10,602	10,288 (89.9)
\geqq 1 month and $<$ 2 months	623	541 (4.7)
<1 month	748	615 (5.4)
Unknown	2,445	112 (-)

(%): Proportions: unknown cases excluded

PZA: Pyrazinamide

Previous table Number of retreatment tuberculosis patients by previous tuberculosis treatment regimen and age group, 2011

		Previous treatment regimen									
Age group	Retreatment	Regimen with HRZ	Other regimen with HR	Other regimen	LTBI treatment	Unknown					
Total	1,687	459	291	277	57	603					
0-4	2	0	0	0	2	0					
5-9	1	0	0	0	1	0					
10-14	1	0	0	0	1	0					
15-19	8	2	0	0	6	0					
20-24	26	15	1	1	5	4					
25-29	38	22	4	1	4	7					
30-34	43	24	5	2	5	7					
35-39	49	26	8	3	7	5					
40-44	46	26	3	2	5	10					
45-49	55	31	9	2	4	9					
50-54	55	26	10	4	4	11					
55-59	73	38	13	3	1	18					
60-64	136	55	28	13	5	35					
65-69	132	42	22	20	1	47					
70-74	156	37	24	36	5	54					
75-79	249	51	42	59	1	96					
80-84	304	35	47	77	0	145					
85-89	234	23	51	45	0	115					
90+	79	6	24	9	0	40					

H: Isoniazid, R: Rifampicin, Z: Pyrazinamide

LTBI: Latent Tuberculosis Infection

Previous table Duration of Pyrazinamide treatment in the initial phase of treatment among the treatment completed patients (*1), patients registered as new in 2010

	Total	Completed	(%)
Total	14,418	11556	
2 months	10,602	10288	(89.9)
≥ 1 month and ≤ 2 months	623	541	(4.7)
<1 month	748	615	(5.4)
Unknown	2,445	112	(-)

^{*1} Treatment completed patient: patient who completed the treatment by physician's order

^{%:} Proportion excluding data unknown patients

[Treatment 2]

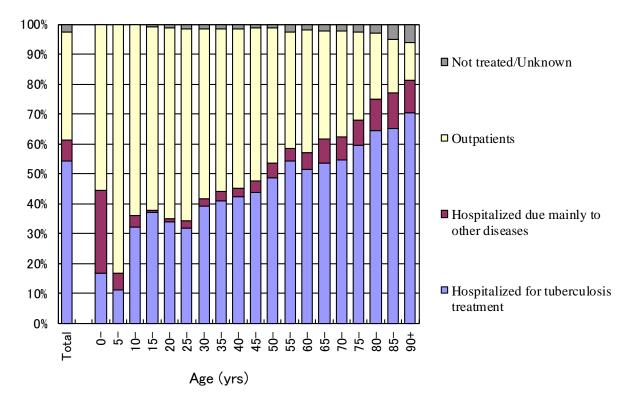


Fig.2 Proportion of initial treatment status among newly notified pulmonary tuberculosis patients by age group, 2011

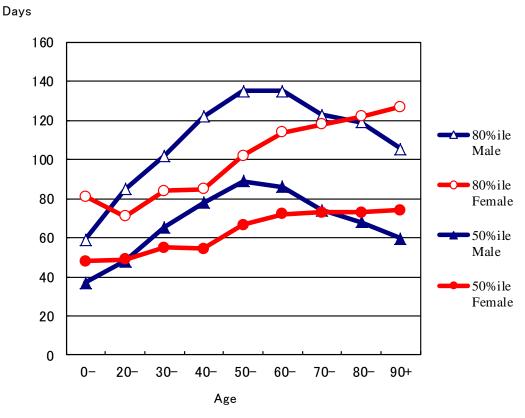


Fig.3 Median (50%ile) and 80%ile of duration of hospitalization among those hospitalized with tuberculosis and with known discharged day, new sputum smear positive pulmonary tuberculosis patients in 2010 by sex

Table 4 Duration of hospitalization among newly notified tuberculosis patients receiving initial treatment at hospital in 2010 by patient classification

			New	ly notified tuber	culosis patients		
		Total –	Sputum sn	near positive	Other	Bacteriologically	Extra- pulmonary
	Total		New	Re-treatment	bacteriologicall y positive	negative and others	tuberculosis patients
Total	23,155	18,277	8,242	2 794	6,358	2,883	4,878
Hospitalized with tuberculosis	11,107	9,817	7,342	684	1,415	376	1,290
Known date of discharge	8,624	7,793	5,939	575	1,043	236	831
Duration of hospitalization among those hospital	lized with tuberc	ulosis and wi	ith known da	te of discharge			
Median (days)	64	65	70	71	43	41.5	46
80% ile (days)	115	116	119	129	88	92	97

 $[\]hbox{$*$: Irrespective of the reason for discharge from hospital}$

Table 5 Treatment status and duration of treatment at the end of the following years (2010/2011) among those newly notified and started tuberculosis treatment in the previous years (2009/2010) by patient classification

Newly notified tuberculosis patients									
			Pulmo	onary tuberculosis pa	tients			(Not in	cluded
	Total	Total —	Sputum smear		Other bacteriologically	Bacteriologically negative and	Extra-pulmonary tuberculosis patients	in the	total)
		Total	New Re-		positive	others	r		
New cases in 2009*	23,779	18,633	8,772	817	5,977	3,067	5,146	4,057	
Known treatment status	23,265 (100%)	18,196 (100%)	8,583 (100%)	808 (100%)	5,800 (100%)	3,005 (100%)	5,069 (100%)	3,992	(100%)
Stopped treatment	18,898 (81.2)	14,756 (81.1)	6,630 (77.2)	600 (74.3)	4,886 (84.2)	2,640 (87.9)	4,142 (81.7)	3,741	(93.7)
Completed	16,955 (72.9)	13,305 (73.1)	5,803 (67.6)	511 (63.2)	4,524 (78.0)	2,467 (82.1)	3,650 (72.0)	3,386	(84.8)
Others	1,667 (7.2)	1,244 (6.8)	729 (8.5)	78 (9.7)	303 (5.2)	134 (4.5)	423 (8.3)	274	(6.9)
Defaulted	254 (1.1)	191 (1.0)	90 (1.0)	9 (1.1)	56 (1.0)	36 (1.2)	63 (1.2)	75	(1.9)
Unknown	22 (0.1)	16 (0.1)	8 (0.1)	2 (0.2)	3 (0.1)	3 (0.1)	6 (0.1)	6	(0.2)
Median of duration of treatment among those	completed treatment and still receiving tr	eatment*							
Subjects#	18,191	14,193	6,195	572	4,825	2,601	3,998	3,522	
Median (days)	270	270	276	285	241	196	272	184	
New cases in 2010**	23,155	18,277	8,242	794	6,358	2,883	4,878	4,902	
Known treatment status	22,612 (100%)	17,819 (100%)	8,068 (100%)	780 (100%)	6,138 (100%)	2,833 (100%)	4,793 (100%)	4,826	(100%)
Stopped treatment	18,010 (79.6)	14,207 (79.7)	6,106 (75.7)	566 (72.6)	5,098 (83.1)	2,437 (86.0)	3,803 (79.3)	4,461	(92.4)
Completed	16,072 (71.1)	12,704 (71.3)	5,294 (65.6)	475 (60.9)	4,694 (76.5)	2,241 (79.1)	3,368 (70.3)	4,018	(83.3)
Others	1,732 (7.7)	1,336 (7.5)	735 (9.1)	82 (10.5)	361 (5.9)	158 (5.6)	396 (8.3)	337	(7.0)
Defaulted	197 (0.9)	160 (0.9)	72 (0.9)	9 (1.2)	41 (0.7)	38 (1.3)	37 (0.8)	99	(2.1)
Unknown	9 (0.0)	7 (0.0)	5 (0.1)	0 (0.0)	2 (0.0)	0 (0.0)	2 (0.0)	7	(0.1)
Median of duration of treatment among those	completed treatment and still receiving tr	eatment*							
Subjects#	17,435	13,698	5,740	547	5,002	2,409	3,737	4,225	
Median (days)	272	272	276	290	244	197	272	183	

LTBI: Latent Tuberculosis Infection

^{#:} Subjects:Those who completed tuberculosis treatment or those who were still receiving treatment at the end of years (2010/2011).

Previous table Proportion (%) hospitalized among newly notified uberculosis patients in 2011 by age group and patient classification

		Pulmonary TB										
Age	Age Total		Sputum posit		Other ba	•	Bacillary negative /unknown		Extra-pulmonary			
	Ht	Но	Ht	Но	Ht	Но	Ht	Но	Ht	Но		
Total	54.2	7.2	89.9	2.5	23.5	13.4	11.8	9.0	28.3	20.0		
0-19	32.2	4.0	93.6	0.0	18.0	6.6	8.8	4.4	23.1	7.7		
20-29	32.7	1.8	89.0	0.3	12.4	2.5	5.1	2.5	15.6	11.7		
30-39	40.1	2.8	89.5	1.0	16.8	4.3	5.8	3.6	21.1	9.6		
40-49	42.9	3.4	87.5	2.2	12.2	5.6	6.3	2.7	20.4	12.4		
50-59	51.6	4.6	90.1	1.2	19.1	8.1	9.9	7.2	15.8	12.7		
60-69	52.5	6.7	88.4	2.3	20.3	11.5	12.3	10.3	20.4	18.2		
70-79	57.3	8.3	90.8	2.6	23.4	14.9	19.2	12.6	26.1	22.4		
80-89	64.7	11.1	90.2	3.7	32.2	21.5	20.2	22.3	38.2	24.1		
90+	70.4	10.8	91.4	2.3	39.2	23.2	30.9	27.9	46.8	28.2		

Ht: Hospitalized for tuberculosis treatment

Ho: Hospitalized mainly due to other diseases

Previous table Outcome of treatment with INH or RFP in initial phase among those newly notified TB patients in 2010 by completion of standard regimen

	Treatment v	with INH	Treatment with RFP				
_	Total	Completed	Total	Completed			
Total	22,233	16,025 (100%)	22,062	16,014 (100%)			
Full course without interruption	15,195	14,567 (90.9)	15,305	14,718 (91.9)			
Full course with interruption	1,194	1,003 (6.3)	1,260	1,076 (6.7)			
Interrupted and discontinued	625	397 (2.5)	402	159 (1.0)			
Unknown*	5,219	58 (0.4)	5,095	61 (0.4)			

^{*:} Including those who were still receiving treatment with INH or RFP and those who were deleted from registration during their treatment.

INH: Isoniazid, RFP: Rifampicin

[Treatment Outcomes]

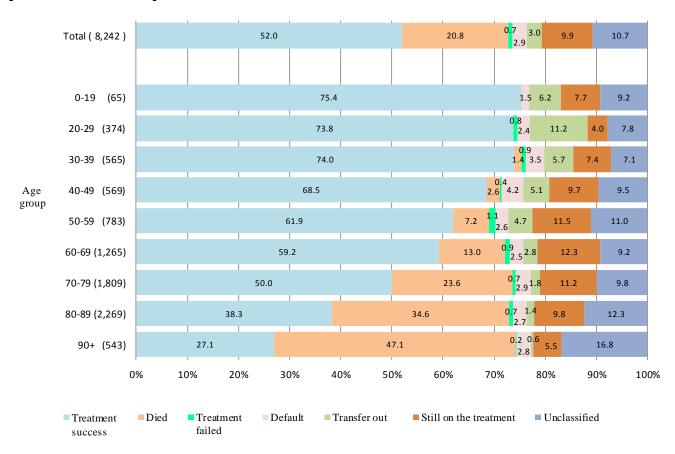


Fig. 4 Treatment outcomes of newly notified sputum-smear positive pulmonary tuberculosis patients in 2010 by age group based on the cohort method (%)

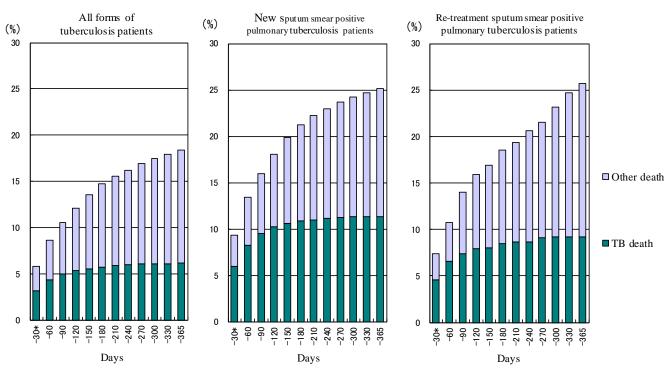


Fig. 5 Cumulative proportion of deaths among newly notified tuberculosis patients in 2010 by period from the beginning of treatment through one year

TB: tuberculosis

^{-30*}: Includes cases who died before the commencement of treatment.

Table 6 Treatment outcome of newly notified pulmonary tuberculosis patients registered in 2010, by patient classification

			Pulmonary tuberculosis patients									
	Tota	1 <u> </u>		Sputum-smear	positive		Other bacteriologically positive		Bacteriologically negative and others			
			New	Retre		nent	positi	ve				
New pulmonary tuberculosis cases	18,277	(100%)	8,242	(100%)	794	(100%)	6,358	(100%)	2,883	(100%)		
Treatment outcomes (*)												
1. Treatment Success	10,157	55.6	4,288	52.0	339	42.7	3,788	59.6	1,742	60.4		
Cure	2,716	14.9	1,658	20.1	143	18.0	685	10.8	230	8.0		
Treatment completed	7,441	40.7	2,630	31.9	196	24.7	3,103	48.8	1,512	52.4		
Treatment Completed 1	5,910	32.3	2,260	27.4	176	22.2	1,965	30.9	1,509	52.3		
Treatment Completed 2	1,531	8.4	370	4.5	20	2.5	1,138	17.9	3	0.1		
2. Died	2,791	15.3	1,711	20.8	165	20.8	742	11.7	173	6.0		
3. Treatment failed	108	0.6	61	0.7	14	1.8	32	0.5	1	0.0		
4. Default	1,051	5.8	235	2.9	16	2.0	465	7.3	335	11.6		
Defaulted 1	147	0.8	49	0.6	2	0.3	43	0.7	53	1.8		
Defaulted 2	904	4.9	186	2.3	14	1.8	422	6.6	282	9.8		
5. Transferred out	503	2.8	248	3.0	16	2.0	155	2.4	84	2.9		
6. Still on treatmen	1,543	8.4	819	9.9	106	13.4	437	6.9	181	6.3		
Still on treatmen 1	255	1.4	135	1.6	23	2.9	65	1.0	32	1.1		
Still on treatmen 1	1,288	7.0	684	8.3	83	10.5	372	5.9	149	5.2		
7. Unclassified	2,124	11.6	880	10.7	138	17.4	739	11.6	367	12.7		
Unclassified 1	446	2.4	171	2.1	13	1.6	215	3.4	47	1.6		
Unclassified 2	192	1.1	103	1.2	15	1.9	59	0.9	15	0.5		
Unclassified 3	479	2.6	226	2.7	50	6.3	137	2.2	66	2.3		
Unclassified 4	200	1.1	93	1.1	12	1.5	69	1.1	26	0.9		
Unclassified 5	807	4.4	287	3.5	48	6.0	259	4.1	213	7.4		

^{*}Treatment outcomes: See Table 7. It includes those who did not start tuberculosis treatment (mostly caused by early death), 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 outcomes.

INH: Isoniazid, RFP: Rifampicin

Table 7 Treatment outcomes of newly notified sputum smear positive pulmonary tuberculosis patients, 2006_2010 year cohorts (%)

	Treatment outcomes	Definition	2006	2007	2008	2009	2010
		n=	9,784	9,421	8,999	8,772	8,242
1.	Cure	A patient who completed treatment within 12 months and whose sputum culture tests were negative at least two times (one of the negative culture results was within three months before the completion of treatment).	17.5	16.9	17.6	20.7	20.1
2.	Treatment completed 1	A patient who completed treatment within 12 months but had only one negative sputum culture result.	24.7	24.9	26.8	27.2	27.4
3.	Treatment completed 2	A patient who completed treatment within 12 months but did not have a negative sputum culture result.	4.2	3.8	3.4	3.9	4.5
4.	Died	A patient who died for any reason during the course of treatment.	18.9	18.4	19.1	19.3	20.8
5.	Treatment failure	A patient whose sputum culture was positive at 5 months or later during the courseof treatment.	1.3	1.0	1.1	0.9	0.7
6.	Default 1	A patient whose treatment was interrupted for 60 days (or 2 consecutive months) ormore.	0.8	0.7	0.6	0.8	0.6
7.	Default 2	A patient whose physician stopped treatment but the amount of treatment days did not fulfi I the standard duration.	4.4	4.3	3.2	2.9	2.3
8.	Transferred out	A patient who has been transferred to another area of the public health center where the patient was registered.	3.0	3.2	2.8	3.3	3.0
9.	Still on treatment 1	A patient who stopped Isoniazid (INH) and/or Rifampicin (RFP) and was still on treatment after 12 months.	1.5	1.7	1.4	2.0	1.6
10.	Still on treatment 2	A patient who was still on treatment after 12 months, and was other than the case of "Still on treatment 1".	10.5	10.3	10.5	8.8	8.3
11.	Unclassifi ed 1	A patient who did not start tuberculosis treatment (due mostly to early death).	1.5	1.9	2.2	2.1	2.1
12.	Unclassified 2	A patient whose initial treatment regimen was unknown.	4.2	4.3	3.9	1.4	1.2
13.	Unclassified 3	A patient whose treatment regimen was other than the standard.	2.1	2.5	2.7	2.5	2.7
14.	Unclassified 4	A patient who stopped INH and/or RFP but completed treatment within 12 months.	1.1	1.1	1.1	1.3	1.1
15.	Unclassified 5	A patient whose information was insufficient for classifying treatment outcome.	4.3	5.1	3.8	2.9	3.5

Table 8 Number (proportion) of cases cancelled from tuberculosis registration by the end of years (in 2010 and in 2011) among those newly notified tuberculosis patients and LTBI patients in the previous years (in 2009, in 2010) by patient classification

		Newly notified tuberculosis patients										
						(Not inclu	ıded in					
	Total	_	Sub-total		Sputum smear positive		positive	Other bacillary	Bacteriologically	Extra-pulmonary	the total) LTBI patients	
			(Pulmona tuberculo	,	New		Retreatment	positive	negative			
New cases in 2009*	23,779		18,633		8,772		817	5,977	3,067	5,146	4,057	
Total of cancellation by the end of 2010	6,685	(28.1)	5,209	(28.0)	2,927	(33.4)	281 (34.4)	1,360 (22.8)	641 (20.9)	1,476 (28.7)	1,214	(29.9)
No need for follow-up	602	(2.5)	277	(1.5)	20	(0.2)	7 (0.9)	78 (1.3)) 172 (5.6)	325 (6.3)	979	(24.1)
Died	4,811	(20.2)	3,856	(20.7)	2,356	(26.9)	224 (27.4)	993 (16.6)	283 (9.2)	955 (18.6)	20	(0.5)
Tuberculosis death	1,419	(6.0)	1,215	(6.5)	932	(10.6)	84 (10.3)	150 (2.5)	49 (1.6)	204 (4.0)	1	(0.0)
Other death	3,392	(14.3)	2,641	(14.2)	1,424	(16.2)	140 (17.1)	843 (14.1)) 234 (7.6)	751 (14.6)	19	(0.5)
Transfer out	976	(4.1)	831	(4.5)	437	(5.0)	35 (4.3)	220 (3.7)	139 (4.5)	145 (2.8)	139	(3.4)
Retreatment during registration	163	(0.7)	139	(0.7)	70	(0.8)	14 (1.7)	40 (0.7)) 15 (0.5)	24 (0.5)	21	(0.5)
Other reason	133	(0.6)	106	(0.6)	44	(0.5)	1 (0.1)	29 (0.5)	32 (1.0)	27 (0.5)	55	(1.4)
New tuberculosis cases in 2010**	23,155		18277		8,242		794	6,358	2,883	4,878	4,902	
Total of cancellation by the end of 2011	6,372	(27.5)	5,086	(27.8)	2,744	(33.3)	272 (34.3)	1,547 (24.3)	523 (18.1)	1,286 (26.4)	843	(17.2)
No need for follow-up	239	(1.0)	111	(0.6)	10	(0.1)	0 (0.0)	43 (0.7)	58 (2.0)	128 (2.6)	431	(8.8)
Died	4,935	(21.3)	3,964	(21.7)	2,293	(27.8)	234 (29.5)	1,160 (18.2)) 277 (9.6)	971 (19.9)	41	(0.8)
Tuberculosis death	1,484	(6.4)	1,266	(6.9)	957	(11.6)	77 (9.7)	188 (3.0)) 44 (1.5)	218 (4.5)	1	(0.0)
Other death	3,451	(14.9)	2,698	(14.8)	1336	(16.2)	157 (19.8)	972 (15.3)	233 (8.1)	753 (15.4)	40	(0.8)
Transfer out	934	(4.0)	793	(4.3)	358	(4.3)	24 (3.0)	263 (4.1)) 148 (5.1)	141 (2.9)	263	(5.4)
Retreatment during registration	149	(0.6)	127	(0.7)	55	(0.7)	9 (1.1)	44 (0.7)) 19 (0.7)	22 (0.5)	28	(0.6)
Other reason	115	(0.5)	91	(0.5)	28	(0.3)	5 (0.6)	37 (0.6)	21 (0.7)	24 (0.5)	80	(1.6)

^{*:} Based on the annual report database in 2010

LTBI: Latent Tuberculosis Infection

^{**:} Based on the annual report database in 2011