

TUBERCULOSIS ANNUAL REPORT 2008

Series 6. Condition of TB (1)

Tuberculosis Surveillance Center, RIT, JATA

Abstract The condition of tuberculosis (TB) at the time of being diagnosed as TB influences the patient's prognosis. This paper focuses on the condition of TB at the time of being diagnosed based on bacteriological status and X-ray findings.

The proportion of bacillary cases among newly notified pulmonary TB patients increased greatly from 25.7% in 1979 to 81.9% in 2008. During this period, the proportion of faradvanced cavitary cases among pulmonary TB patients was around 2% and remained stable. This may mean that diagnosis became to be performed bacteriologically rather than radiologically.

The proportion of bacillary cases among newly notified pulmonary TB patients in 2008 was studied by sex and 5-year age group. The proportion of bacillary cases increased with age in both male and female TB patients. The proportion of cavitary cases increased in patients aged up to their 50's and then decreased with age. This tendency was more remarkable in male TB patients than in female. Although the proportion of cavitary cases among elderly TB patients was lower than among youths, the proportion having extensive lesions was greater than that of youths.

The proportion of sputum smear positive cases with cavity among pulmonary TB patients aged 30-59 years was 32.4% in male TB patients and 20.5% in female TB patients. According to occupation, this proportion was highest in temporary workers (51.7%) for male TB cases, service workers (28.7%) for female TB cases, and lowest among "teachers/nursery nurses" in both sexes: 15.4% of male TB cases and 8.3% of female TB cases, respectively.

Key words: Tuberculosis, Bacillary, Sputum smear positive, X-ray, Cavity, Sex, Age, Occupation

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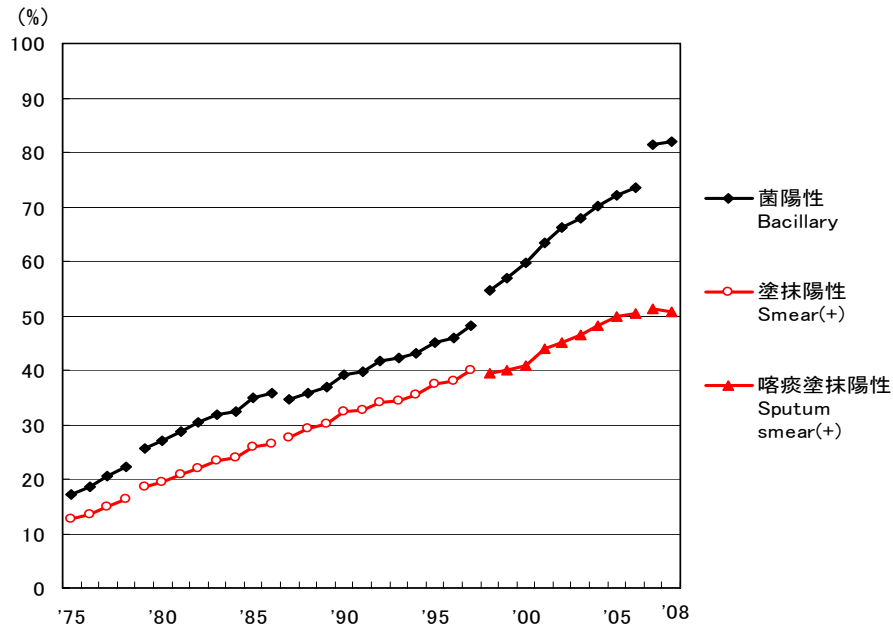


図1 新登録肺結核患者中菌陽性割合の推移、1975～2008年
 Fig.1 Proportion of bacteriologically confirmed cases among newly notified pulmonary TB patients, 1975-2008

資料と対象 Sources of information and subjects:
 結核登録者の定期報告 Annual TB reports from public health centers
 1975-1978: 全結核 All forms of TB
 1979-1986: 肺結核 Pulmonary TB
 電算化結核サーベイランスシステム Nationwide computerized TB surveillance system
 1987-1997: 肺結核 Pulmonary TB
 1998-2006: 肺結核(活動性分類の変更) Pulmonary TB (New criteria for notification)
 2007-2008: 肺結核(核酸増幅法項目の追加) Pulmonary TB (Item of nucleic acid amplification was added)

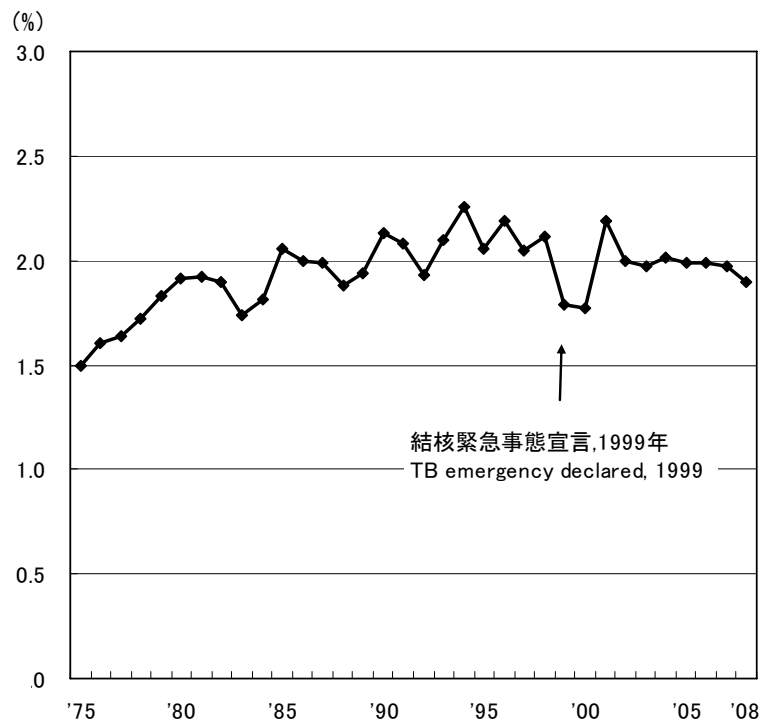


図2 新登録肺結核患者中広汎空洞型割合の推移、1975～2008年
 Fig.2 Proportion of far-advanced cavitory cases among newly notified pulmonary TB patients, 1975-2008

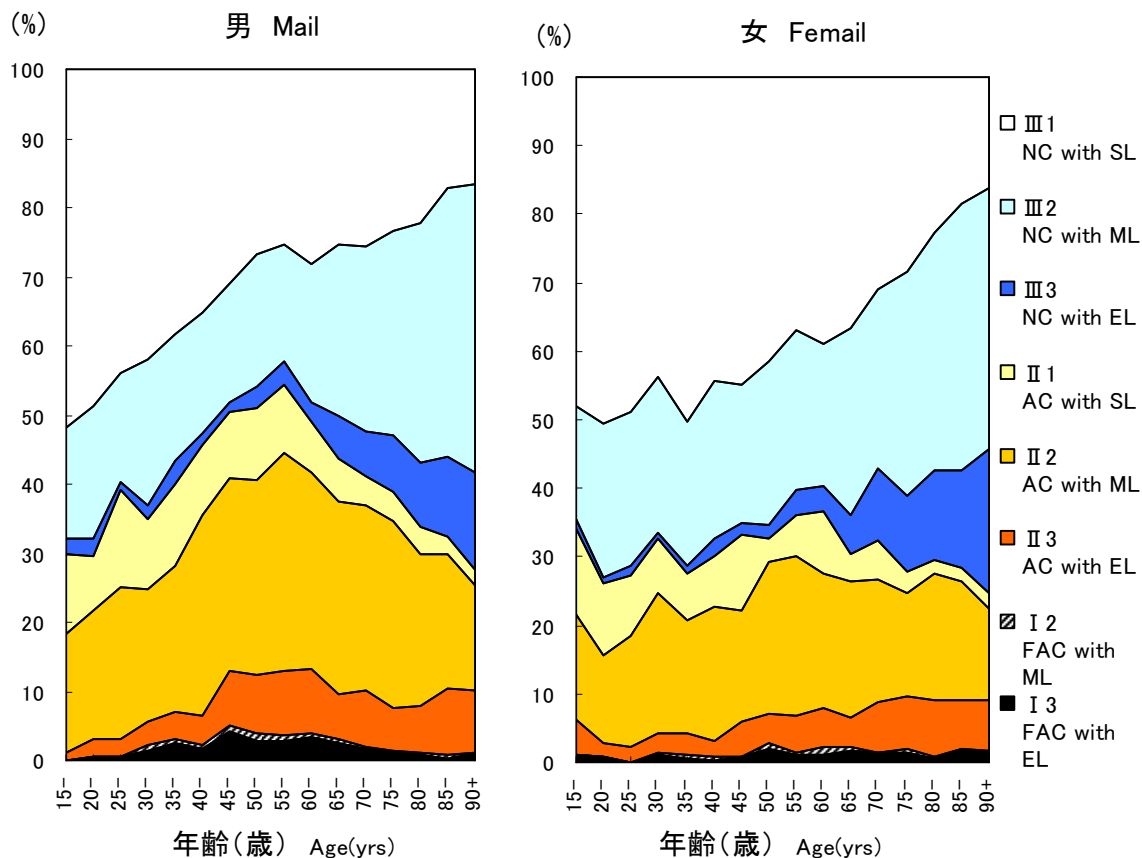


図4 新登録肺結核患者中X線学会分類別所見割合、性・年齢5歳階層別、2008年
 Fig.4 Proportion of cases classified by X-ray Gakkai classification by sex and 5-year age group, 2008

NC : Non-cavitary SL : Slight lesion
 AC : Advanced cavitory ML : Moderate lesion
 FAC: Far-advance cavitory EL : Extensive lesion

表 性・職業別、30~59歳新登録肺結核患者中有空洞あるいは／かつ喀痰塗抹陽性の割合、2008年
 Table Proportion of cavitory or/and sputum smear positive cases among newly notified pulmonary TB patients aged 30-59 years, 2008

	男 Mail						女 Female							
	肺結核 Pulmonary TB	有空洞あるいは 喀痰塗抹陽性 Cavitory or sputum smear(+)			有空洞かつ 喀痰塗抹陽性 Cavitory and sputum smear(+)			肺結核 Pulmonary TB	有空洞あるいは 喀痰塗抹陽性 Cavitory or sputum smear(+)			有空洞かつ 喀痰塗抹陽性 Cavitory and sputum smear(+)		
		n	%	Ratio	n	%	Ratio		n	%	Ratio	n	%	Ratio
接客業 Service workers	182	138	75.8	2.0	73	40.1	2.6	136	75	55.1	1.3	39	28.7	3.4
医療職 Medical workers	79	35	44.3	1.2	13	16.5	1.1	250	109	43.6	1.0	27	10.8	1.3
教員・保育士 Teachers/ Nursery nurses	39	15	38.5	1.0	6	15.4	1.0	36	15	41.7	1.0	3	8.3	1.0
他の常用勤労者 Other regular workers	1,951	1,064	54.5	1.4	530	27.2	1.8	472	214	45.3	1.1	74	15.7	1.9
他の臨時・日雇 Other temporary/ daily workers	296	228	77.0	2.0	153	51.7	3.4	154	86	55.8	1.3	40	26.0	3.1
他の自営自由 Other self- employed	337	230	68.2	1.8	130	38.6	2.5	56	26	46.4	1.1	9	16.1	1.9
無職 Jobless/ Others	808	559	69.2	1.8	311	38.5	2.5	364	206	56.6	1.4	104	28.6	3.4
その他 Others	172	94	54.7	1.4	36	20.9	1.4	341	173	50.7	1.2	74	21.7	2.6
総数 Total	3,864	2,363	61.2		1,252	32.4		1,809	904	50.0		370	20.5	

その他:家事、学生、不明 Others:Houskeepers/ Students/ Unknown

Ratio: 教員・保育士の割合に対するその他割合の比 The ratio of each proportion to that of teachers/nursery nurses

TUBERCULOSIS ANNUAL REPORT 2008
Series 7. Condition of TB (2)

Tuberculosis Surveillance Center, RIT, JATA

Abstract The disease condition of the patient at the time of diagnosis of tuberculosis (TB) greatly influences subsequent TB treatment and prognosis. Here we report on the data of HIV infection, diabetes and drug susceptibility test results, which were added to the central TB surveillance database from 2007.

In the TB surveillance system, the item 'HIV' was classified into three codes, 'has HIV', 'does not have HIV' and 'unknown'. Although it was requested that 'has HIV' and 'does not have HIV' be coded based on HIV test results, this rule was not strictly followed in public health centers, and medical institutions usually give information to a public health center only in the case of HIV positive. Therefore, 'does not have HIV' cannot be assumed based on the test result. Hence, we show only the number of TB patients having HIV infection.

In 2007 _ 2008, 124 TB patients newly notified were reported as having HIV. Of those, 110 (88.7%) were male and 14 (11.3 %) were female, and 25 (20.2%) were foreigners. Although the ages of those having HIV were broadly distributed from the 20's to 70's, most patients were from 30 to 44 years old.

As to diabetes, 12.9%(3,192/24,760) of newly notified TB patients in 2008 were reported as having diabetes, and this proportion was higher among males (15.0%) than females (9.2%).

Susceptibility test results of 8,505 culture positive pulmonary TB patients were obtained through the system in 2007 _ 2008, among which 98 (1.2%) were MDR TB. The proportion of MDR was different between new treatment and retreatment cases, 0.6% of new treatment and 6.5% of retreatment, respectively. The proportion of MDR was the highest among

20's in both males and females. More than half of MDR TB patients in 20's were foreigners.

Key words: Tuberculosis, Sex, Age, Foreigner, HIV, Diabetes, Susceptibility test, MDR

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表1 新登録結核患者中「HIV合併あり」と報告された患者数、性・年齢階層別、2007～2008年
 Table 1 Number of cases reported as having HIV infection among newly notified TB patients, 2007-2008

年齢 Age	喀痰塗抹陽性 Sputum smear positive		他結核菌陽性 Other bacillary positive		菌陰性結核 Bacillary negative		肺外 Extra-pulmonary		総数 Total	
	男 M	女 F	男 M	女 F	男 M	女 F	男 M	女 F	男 M	女 F
2007	14	3(3)	7(1)	1(1)	9	-	20(7)	3(1)	50(8)	7(5)
2008	20(2)	4(3)	8(1)	-	5	2(1)	27(4)	1(1)	60(7)	7(5)
2007～2008年 総数 Total	34(2)	7(6)	15(2)	1(1)	14	2(1)	47(11)	4(2)	110(15)	14(10)
0-19	-	-	-	-	-	-	-	-	-	-
20-24	2(1)	-	-	-	-	-	1	1	3(1)	1
25-29	-	1(1)	-	-	-	-	4	-	4	1(1)
30-34	5(1)	3(3)	2	-	1	1(1)	5(1)	-	13(2)	4(4)
35-39	8	1(1)	6(2)	1(1)	3	-	7(2)	2(2)	24(4)	4(4)
40-44	8	1(1)	4	-	3	1	12(7)	1	27(7)	3(1)
45-49	3	-	-	-	2	-	8(1)	-	13(1)	-
50-54	1	-	2	-	2	-	4	-	9	-
55-59	2	-	-	-	3	-	4	-	9	-
60-64	2	1	1	-	-	-	-	-	3	1
65+	3	-	-	-	-	-	2	-	5	-

(): 外国人患者の再掲

Re-count of foreigners

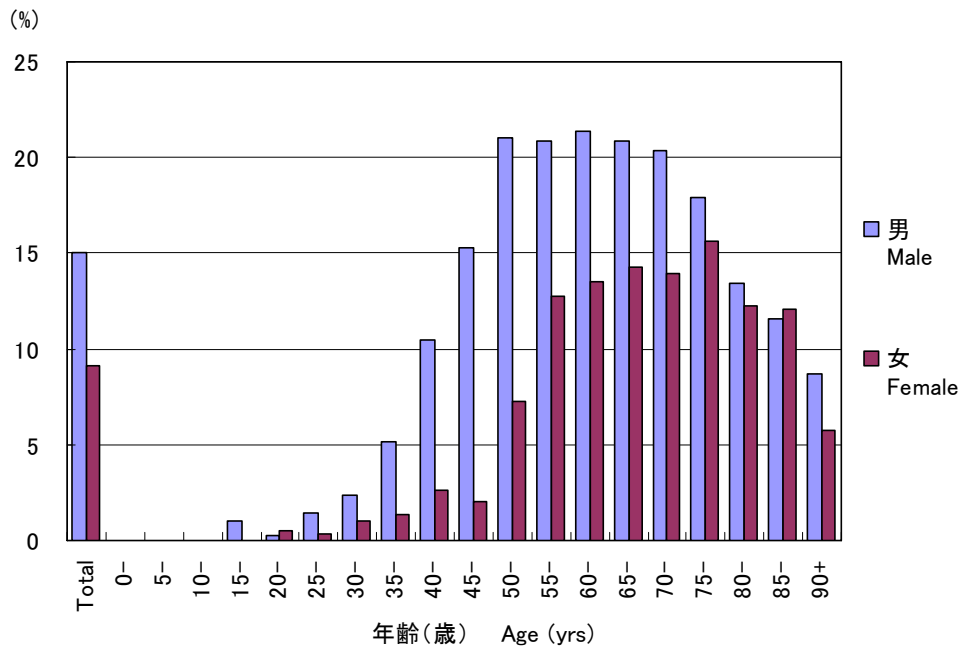


図. 新登録結核患者中「糖尿病合併あり」と報告された患者の割合、性・年齢階層別、2008年
 Fig.1 Proportion of cases reported having diabetes among newly notified TB patients by sex and age group, 2008

表2 新登録肺結核患者の薬剤感受性検査結果および耐性率、治療歴別、2007～2008年

Table 2 Drug susceptibility test results and proportion with drug resistance by treatment history, 2007-2008

治療歴、菌検査状況、耐性状況 Treatment history, Bacteriological test, Drug resistance	2007				2008			
	n	%	%	%	n	%	%	%
総数 Total								
肺結核 Pulmonary TB	19,893	100%			19,393	100%		
培養結果把握 Culture result obtained	12,690	63.8			12,087	62.3		
培養陽性 Culture positive	9,983	50.2	100%		9,480	48.9	100%	
感受性結果把握 DST result obtained	4,173		41.8	100%	4,332		45.7	100%
多剤耐性 MDR	50			1.2	48			1.1
INH耐性 Resistant to any INH	258			6.2	211			4.9
RFP耐性 Resistant to any RFP	72			1.7	64			1.5
1剤以上耐性 Resistant to one and more	628			15.0	550			12.7
初回治療 New treatment								
肺結核 Pulmonary TB	18,220	100%			17,515	100%		
培養結果把握 Culture result obtained	11,602	63.7			10,845	61.9		
培養陽性 Culture positive	9,148	50.2	100%		8,540	48.8	100%	
感受性結果把握 DST result obtained	3,752		41.0	100%	3,885		45.5	100%
多剤耐性 MDR	23			0.6	28			0.7
INH耐性 Resistant to any INH	194			5.2	163			4.2
RFP耐性 Resistant to any RFP	36			1.0	39			1.0
1剤以上耐性 Resistant to one and more	516			13.8	470			12.1
再治療 Re-treatment								
肺結核 Pulmonary TB	1,409	100%			1,542	100%		
培養結果把握 Culture result obtained	946	67.1			1,059	68.7		
培養陽性 Culture positive	713	50.6	100%		779	50.5	100%	
感受性結果把握 DST result obtained	376		52.7	100%	391		50.2	100%
多剤耐性 MDR	27			7.2	20			5.1
INH耐性 Resistant to any INH	63			16.8	48			12.3
RFP耐性 Resistant to any RFP	36			9.6	24			6.1
1剤以上耐性 Resistant to one and more	107			28.5	75			19.2
治療歴不明 No information about treatment history								
肺結核 Pulmonary TB	264	100%			336	100%		
培養結果把握 Culture result obtained	142	53.8			183	54.5		
培養陽性 Culture positive	122	46.2	100%		161	47.9	100%	
感受性結果把握 DST result obtained	45		36.9	100%	56		34.8	100%
多剤耐性 MDR	0			0.0	0			0.0
INH耐性 Resistant to any INH	1			2.2	0			0.0
RFP耐性 Resistant to any RFP	0			0.0	1			1.8
1剤以上耐性 Resistant to one and more	5			11.1	5			8.9

DST: Drug susceptibility test

MDR : Multi-drug resistant

感受性結果は重複あり

Cases having drug resistance are counted independently by drug

表3 新登録肺結核患者の薬剤感受性検査結果および耐性率、性・年齢階層別、2007～2008年
Table 3 Drug susceptibility test results and proportion with drug resistance by sex and age group, 2007-2008

年齢 Age group	総数 Total										初回治療(再掲) New treatment (Re-count)									
	男 Male					女 Female					男 Male					女 Female				
	感受性 結果把握	多剤 耐性	INH耐 性	RFP耐 性	1剤以 上耐 性	感受性 結果把握	多剤 耐性	INH耐 性	RFP耐 性	1剤以 上耐 性	感受性 結果把握	多剤 耐性	INH耐 性	RFP耐 性	1剤以 上耐 性	感受性 結果把握	多剤 耐性	INH耐 性	RFP耐 性	1剤以 上耐 性
DST result obtained	MDR	Resist. to any INH	Resist. To any RFP	Resist. to one and more	DST result obtained	MDR	Resist. to any INH	Resist. To any RFP	Resist. to one and more	DST result obtained	MDR	Resist. to any INH	Resist. To any RFP	Resist. to one and more	DST result obtained	MDR	Resist. to any INH	Resist. To any RFP	Resist. to one and more	
総数 Total	5,900	64	317	98	834	2,605	34	152	38	344	5,226	32	236	52	686	2,411	19	121	23	300
0-19	35	0	0	0	6	36	0	4	0	6	34	0	0	0	6	35	0	4	0	6
20-29	326	7	22	9	51	274	10	28	11	53	310	6	20	8	48	262	9	26	10	51
30-39	422	2	26	8	71	305	2	18	3	46	399	1	24	7	65	288	1	16	2	42
40-49	523	4	36	6	91	227	5	18	5	40	488	2	32	3	78	216	4	17	4	37
50-59	953	16	50	23	159	189	4	11	4	29	873	9	40	14	140	169	1	7	1	25
60-69	1,131	13	66	21	176	257	6	19	6	44	1,003	7	50	9	143	236	1	10	1	32
70-79	1,309	18	72	23	175	516	4	24	5	58	1,101	5	41	6	128	460	1	16	2	46
80+	1,201	4	45	8	105	801	3	30	4	68	1,018	2	29	5	78	745	2	25	3	61
総数 Total	100	1.1	5.4	1.7	14.1	100	1.3	5.8	1.5	13.2	100	0.6	4.5	1.0	13.1	100	0.8	5.0	1.0	12.4
0-19	100	0.0	0.0	0.0	17.1	100	0.0	11.1	0.0	16.7	100	0.0	0.0	0.0	17.6	100	0.0	11.4	0.0	17.1
20-29	100	2.1	6.7	2.8	15.6	100	3.6	10.2	4.0	19.3	100	1.9	6.5	2.6	15.5	100	3.4	9.9	3.8	19.5
30-39	100	0.5	6.2	1.9	16.8	100	0.7	5.9	1.0	15.1	100	0.3	6.0	1.8	16.3	100	0.3	5.6	0.7	14.6
40-49	100	0.8	6.9	1.1	17.4	100	2.2	7.9	2.2	17.6	100	0.4	6.6	0.6	16.0	100	1.9	7.9	1.9	17.1
50-59	100	1.7	5.2	2.4	16.7	100	2.1	5.8	2.1	15.3	100	1.0	4.6	1.6	16.0	100	0.6	4.1	0.6	14.8
60-69	100	1.1	5.8	1.9	15.6	100	2.3	7.4	2.3	17.1	100	0.7	5.0	0.9	14.3	100	0.4	4.2	0.4	13.6
70-79	100	1.4	5.5	1.8	13.4	100	0.8	4.7	1.0	11.2	100	0.5	3.7	0.5	11.6	100	0.2	3.5	0.4	10.0
80+	100	0.3	3.7	0.7	8.7	100	0.4	3.7	0.5	8.5	100	0.2	2.8	0.5	7.7	100	0.3	3.4	0.4	8.2

表4 新登録肺結核患者の薬剤感受性検査結果および耐性率、性・年齢階層別、2007～2008年 (再掲;外国人)
Table 4 Drug susceptibility test results and proportion with drug resistance by sex and age group, 2007-2008 (Re-count of foreigners)

年齢 Age group	総数 Total										初回治療(再掲) New treatment (Re-count)									
	男 Male					女 Female					男 Male					女 Female				
	感受性 結果把握	多剤 耐性	INH耐 性	RFP耐 性	1剤以 上耐 性	感受性 結果把握	多剤 耐性	INH耐 性	RFP耐 性	1剤以 上耐 性	感受性 結果把握	多剤 耐性	INH耐 性	RFP耐 性	1剤以 上耐 性	感受性 結果把握	多剤 耐性	INH耐 性	RFP耐 性	1剤以 上耐 性
DST result obtained	MDR	Resist. to any INH	Resist. To any RFP	Resist. to one and more	DST result obtained	MDR	Resist. to any INH	Resist. To any RFP	Resist. to one and more	DST result obtained	MDR	Resist. to any INH	Resist. To any RFP	Resist. to one and more	DST result obtained	MDR	Resist. to any INH	Resist. To any RFP	Resist. to one and more	
総数 Total	99	4	8	6	20	147	9	23	10	40	94	3	7	5	18	141	9	23	10	39
0-19	2	0	0	0	1	7	0	0	0	0	2	0	0	0	1	7	0	0	0	0
20-29	42	4	6	6	9	68	9	18	10	28	40	3	5	5	8	67	9	18	10	28
30-39	15	0	0	0	1	34	0	3	0	8	14	0	0	0	1	33	0	3	0	8
40-49	19	0	2	0	6	18	0	2	0	4	18	0	2	0	5	15	0	2	0	3
50-59	10	0	0	0	1	9	0	0	0	0	10	0	0	0	1	9	0	0	0	0
60-69	2	0	0	0	1	2	0	0	0	0	2	0	0	0	1	2	0	0	0	0
70-79	4	0	0	0	1	3	0	0	0	0	3	0	0	0	1	3	0	0	0	0
80+	5	0	0	0	0	6	0	0	0	0	5	0	0	0	0	5	0	0	0	0