

# Chapter 10

## FEMALE BREAST (ICD-10: C50)

Cancer of the female breast was the most common cancer in women being the leading site in Mumbai, Thiruvananthapuram and Dibrugarh. It was the second most common cancer in the remaining registries. The relative proportion of breast cancer in females varied from 14.4% in Guwahati to 30.3% in Mumbai (Table 10.1).

The five year age distribution (Table 10.2 and Fig. 10.1) shows a peak relative proportion between 45-49 years in all registries except in Dibrugarh where the peak is seen in the ten year younger age group – 35-39 years.

Table 10.3 gives the number and relative proportion of the basis of diagnosis, with over 93% of cancers in all registries recording a microscopic diagnosis.

Compared to similar proportion in other sites of cancer, the proportion of breast cancers categorised as 'No Cancer Directed Treatment' is low in all registries (Table 10.4) except Mumbai where 38.4% of patients belonged to the "No CDT" group.

The proportions of breast cancers presenting with localised disease varied from 1.0% in Dibrugarh to 22.3% in Thiruvananthapuram whereas regional spread of the disease varied from 27.4% in Mumbai to 87.9% in Dibrugarh (Table 10.5).

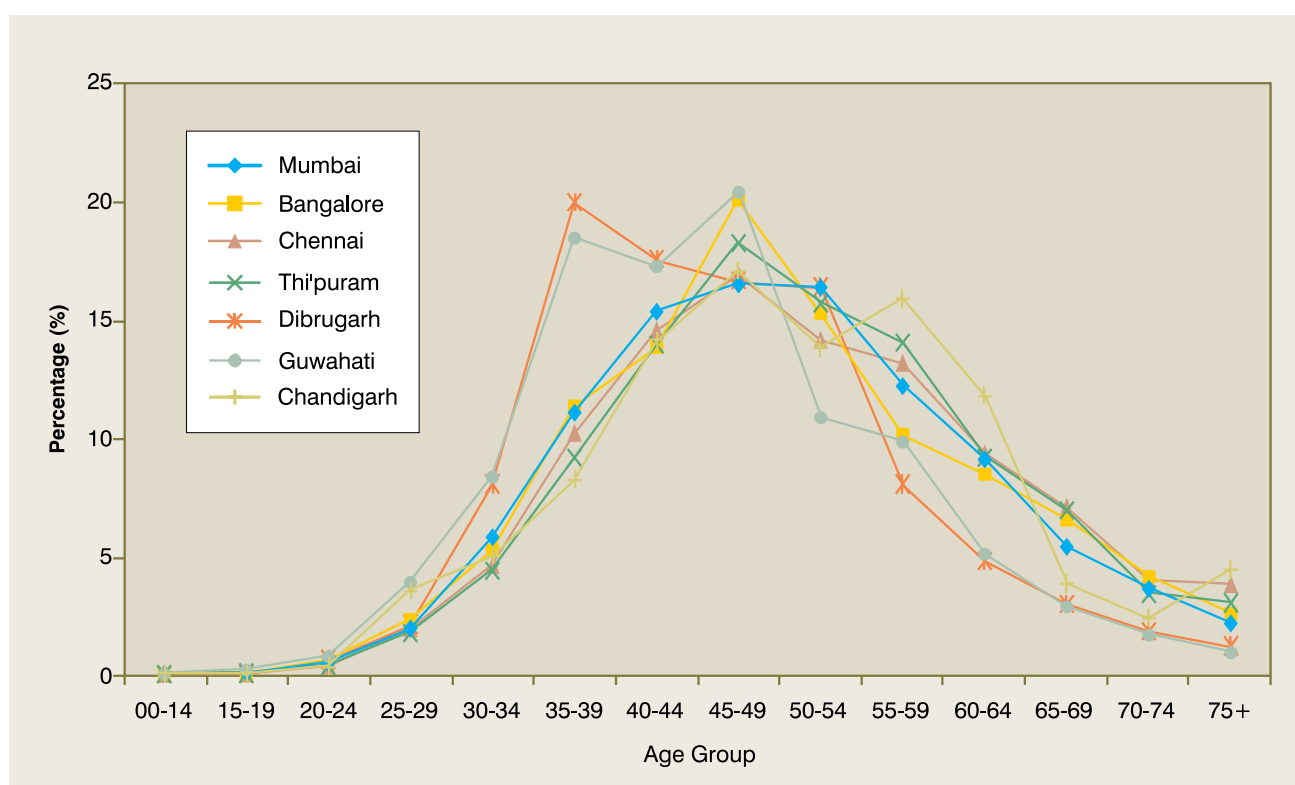
Tables 10.6 to 10.8 give the picture of the different types of treatment given to these patients.

**Table 10.1: Number (#), Relative Proportion (%) and Rank (R) (2007-2011)  
Female Breast (ICD-10: C50)**

Registry	Total	#	%	R
<b>Mumbai</b>	18528	5620	30.3	1
<b>Bangalore</b>	13125	2052	15.6	2
<b>Chennai</b>	17499	3921	22.4	2
<b>Thi'puram</b>	18809	5354	28.5	1
<b>Dibrugarh</b>	2276	336	14.8	1
<b>Guwahati</b>	4679	674	14.4	2
<b>Chandigarh</b>	2092	341	16.3	2

**Table 10.2: Number (#) and Relative Proportion (%) according to Five-Year Age Group (2007-2011) - Female Breast (ICD-10: C50)**

Age Group	Mumbai		Bangalore		Chennai		Thi'puram		Dibrugarh		Guwahati		Chandigarh	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
00-04	1	0.0	-	-	-	-	-	-	-	-	-	-	-	-
05-09	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	1	0.0	-	-	-	-	-	-
15-19	3	0.1	-	-	1	0.0	2	0.0	-	-	1	0.1	-	-
20-24	27	0.5	12	0.6	14	0.4	20	0.4	2	0.6	5	0.7	1	0.3
25-29	109	1.9	47	2.3	76	1.9	93	1.7	7	2.1	26	3.9	12	3.5
30-34	326	5.8	107	5.2	181	4.6	234	4.4	27	8.0	56	8.3	17	5.0
35-39	622	11.1	232	11.3	400	10.2	489	9.1	67	19.9	124	18.4	28	8.2
40-44	862	15.3	283	13.8	570	14.5	745	13.9	59	17.6	116	17.2	48	14.1
45-49	927	16.5	410	20.0	662	16.9	975	18.2	56	16.7	137	20.3	58	17.0
50-54	920	16.4	312	15.2	554	14.1	840	15.7	55	16.4	73	10.8	47	13.8
55-59	685	12.2	207	10.1	516	13.2	750	14.0	27	8.0	66	9.8	54	15.8
60-64	511	9.1	173	8.4	366	9.3	491	9.2	16	4.8	34	5.0	40	11.7
65-69	303	5.4	133	6.5	277	7.1	370	6.9	10	3.0	19	2.8	13	3.8
70-74	203	3.6	84	4.1	155	4.0	182	3.4	6	1.8	11	1.6	8	2.3
75+	121	2.2	52	2.5	149	3.8	162	3.0	4	1.2	6	0.9	15	4.4
<b>All Ages</b>	<b>5620</b>	<b>100.0</b>	<b>2052</b>	<b>100.0</b>	<b>3921</b>	<b>100.0</b>	<b>5354</b>	<b>100.0</b>	<b>336</b>	<b>100.0</b>	<b>674</b>	<b>100.0</b>	<b>341</b>	<b>100.0</b>

**Fig 10.1: Five Year Age Group Distribution (2007-2011) - Female Breast (ICD-10: C50)**

**Table 10.3: Number (#) and Relative Proportion (%) Based on Different Methods of Diagnosis (2007-2011) - Female Breast (ICD-10: C50)**

Registry	Microscopic		Clinical		All Imaging Techniques		Others		Unknown		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
<b>Mumbai</b>	5280	94.0	6	0.1	331	5.9	3	0.1	-	-	5620	100.0
<b>Bangalore</b>	1933	94.2	5	0.2	52	2.5	1	0.0	61	3.0	2052	100.0
<b>Chennai</b>	3668	93.5	82	2.1	171	4.4	-	-	-	-	3921	100.0
<b>Thi'puram</b>	5311	99.2	7	0.1	35	0.7	1	0.0	-	-	5354	100.0
<b>Dibrugarh</b>	334	99.4	1	0.3	1	0.3	-	-	-	-	336	100.0
<b>Guwahati</b>	663	98.4	1	0.1	10	1.5	-	-	-	-	674	100.0
<b>Chandigarh</b>	340	99.7	1	0.3	-	-	-	-	-	-	341	100.0

**Table 10.4: Numbers (#) and Relative Proportion (%) according to Broad Groups of Treatment (Tmt.) (2007-2011) - Female Breast (ICD-10: C50)**

Treatment Group	Mumbai		Bangalore		Chennai		Thi'puram		Dibrugarh		Guwahati		Chandigarh	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	634	11.3	325	15.8	425	10.8	275	5.1	-	-	45	6.7	36	10.6
Prior & Tmt. at RI	1021	18.2	483	23.5	125	3.2	1947	36.4	38	11.3	226	33.5	104	30.5
Tmt. Only at RI	1808	32.2	872	42.5	2174	55.4	2863	53.5	271	80.7	274	40.7	173	50.7
No CDT*	2157	38.4	372	18.1	1197	30.5	269	5.0	27	8.0	129	19.1	28	8.2
<b>Total Patients</b>	<b>5620</b>	<b>100.0</b>	<b>2052</b>	<b>100.0</b>	<b>3921</b>	<b>100.0</b>	<b>5354</b>	<b>100.0</b>	<b>336</b>	<b>100.0</b>	<b>674</b>	<b>100.0</b>	<b>341</b>	<b>100.0</b>

\*CDT=Cancer Directed Treatment

**Table 10.5: Number (#) and Relative Proportion (%) according to the Clinical Extent of Diseases (Excludes Patients Previously Treated) (2007-2011) - Female Breast (ICD-10: C50)**

Registry	Localised (L)		Regional (R)		L+R		Distant		Others		Unknown		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
<b>Mumbai</b>	483	12.2	1085	27.4	1568	39.5	268	6.8	4	0.1	2125	53.6	3965	100.0
<b>Bangalore</b>	179	16.1	922	83.1	1101	99.3	-	-	7	0.6	1	0.1	1109	100.0
<b>Chennai</b>	175	5.2	2705	80.2	2880	85.4	489	14.5	2	0.1	-	-	3371	100.0
<b>Thi'puram</b>	697	22.3	2081	66.4	2778	88.7	354	11.3	-	-	-	-	3132	100.0
<b>Dibrugarh</b>	3	1.0	262	87.9	265	88.9	31	10.4	2	0.7	-	-	298	100.0
<b>Guwahati</b>	29	7.2	299	74.2	328	81.4	73	18.1	2	0.5	-	-	403	100.0
<b>Chandigarh</b>	5	2.5	155	77.1	160	79.6	37	18.4	4	2.0	-	-	201	100.0

**Table 10.6: Number (#) and Relative Proportion (%) according to Type of Treatment Given at Reporting Institution (2007-2011) - Female Breast (ICD-10: C50)**

Type of Treatment	Mumbai		Bangalore		Chennai		Thi'puram		Dibrugarh		Guwahati		Chandigarh	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
<b>Total Patients</b>	<b>1845</b>	<b>100.0</b>	<b>872</b>	<b>100.0</b>	<b>2174</b>	<b>100.0</b>	<b>2863</b>	<b>100.0</b>	<b>271</b>	<b>100.0</b>	<b>274</b>	<b>100.0</b>	<b>172</b>	<b>100.0</b>
<b>Specific Treatments</b>														
Surgery (S)	277	15.0	67	7.7	33	1.5	141	4.9	64	23.6	15	5.5	2	1.2
Radiotherapy (R)	19	1.0	7	0.8	4	0.2	8	0.3	18	6.6	8	2.9	6	3.5
Chemotherapy (C)	83	4.5	122	14.0	87	4.0	171	6.0	16	5.9	60	21.9	53	30.8
S + R	57	3.1	29	3.3	18	0.8	25	0.9	25	9.2	13	4.7	14	8.1
S + C	151	8.2	217	24.9	105	4.8	827	28.9	132	48.7	68	24.8	12	7.0
R + C	12	0.7	31	3.6	170	7.8	38	1.3	8	3.0	9	3.3	28	16.3
S + R + C	526	28.5	280	32.1	465	21.4	564	19.7	8	3.0	99	36.1	49	28.5
Hormone Therapy (H)	11	0.6	1	0.1	55	2.5	50	1.7	-	-	-	-	2	1.2
S + H	66	3.6	7	0.8	58	2.7	97	3.4	-	-	-	-	-	-
R + H	9	0.5	1	0.1	11	0.5	6	0.2	-	-	-	-	2	1.2
C + H	38	2.1	1	0.1	97	4.5	76	2.7	-	-	-	-	1	0.6
S + R + H	65	3.5	3	0.3	45	2.1	52	1.8	-	-	-	-	-	-
S + C + H	74	4.0	22	2.5	157	7.2	309	10.8	-	-	1	0.4	-	-
R + C + H	11	0.6	1	0.1	161	7.4	35	1.2	-	-	-	-	-	-
S + R + C + H	446	24.2	83	9.5	707	32.5	452	15.8	-	-	1	0.4	3	1.7
Others	-	-	-	-	1	0.0	12	0.4	-	-	-	-	-	-
<b>Modality of Therapy</b>														
Single	390	21.1	197	22.6	179	8.2	370	12.9	98	36.2	83	30.3	63	36.6
Combination	1444	78.3	674	77.3	1833	84.3	2446	85.4	173	63.8	191	69.7	109	63.4
<b>Type of Any Treatment</b>														
Any Surgery	1662	34.1	708	35.1	1588	24.8	2467	34.3	229	50.7	197	34.7	80	23.8
Any R	1145	23.5	435	21.5	1581	24.7	1180	16.4	59	13.1	130	22.9	102	30.4
Any C	1341	27.5	757	37.5	1949	30.4	2472	34.4	164	36.3	238	42.0	146	43.5
Any H	720	14.8	119	5.9	1291	20.1	1077	15.0	-	-	2	0.4	8	2.4

**Table 10.7: Number (#) and Relative Proportion (%) of Types of Treatment according to Clinical Extent of Disease (2007-2011) - Female Breast (ICD-10: C50)**

Clinical Extent	Mumbai		Bangalore		Chennai		Thi'puram		Dibrugarh		Guwahati		Chandigarh	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
<b>Localised</b>														
Surgery (S)	28	6.6	20	14.3	7	4.4	54	7.9	2	66.7	5	21.7	-	-
Radiotherapy (R)	-	-	-	-	-	-	-	-	-	-	-	-	1	50.0
Chemotherapy (C)	2	0.5	7	5.0	1	0.6	2	0.3	-	-	-	-	-	-
S + R	12	2.8	14	10.0	6	3.8	5	0.7	-	-	2	8.7	-	-
S + C	37	8.8	45	32.1	16	10.0	201	29.5	1	33.3	3	13.0	-	-
R + C	-	-	5	3.6	6	3.8	2	0.3	-	-	1	4.3	-	-
S + R + C	124	29.4	28	20.0	19	11.9	125	18.3	-	-	12	52.2	-	-
Hormone Therapy (H)	1	0.2	-	-	12	7.5	1	0.1	-	-	-	-	-	-
S + H	30	7.1	4	2.9	20	12.5	42	6.2	-	-	-	-	-	-
R + H	-	-	-	-	1	0.6	-	-	-	-	-	-	1	50.0
C + H	-	-	-	-	1	0.6	-	-	-	-	-	-	-	-
S + R + H	45	10.7	1	0.7	11	6.9	11	1.6	-	-	-	-	-	-
S + C + H	28	6.6	5	3.6	23	14.4	114	16.7	-	-	-	-	-	-
R + C + H	-	-	-	-	5	3.1	-	-	-	-	-	-	-	-
S + R + C + H	115	27.3	11	7.9	32	20.0	125	18.3	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>All Treatments</b>	<b>422</b>	<b>100.0</b>	<b>140</b>	<b>100.0</b>	<b>160</b>	<b>100.0</b>	<b>682</b>	<b>100.0</b>	<b>3</b>	<b>100.0</b>	<b>23</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>
<b>Regional</b>														
Surgery (S)	35	3.9	46	6.8	25	1.4	90	4.5	59	24.5	10	4.7	2	1.4
Radiotherapy (R)	1	0.1	5	0.7	2	0.1	1	0.1	15	6.2	4	1.9	3	2.2
Chemotherapy (C)	33	3.7	88	13.1	32	1.8	88	4.4	5	2.1	30	14.2	41	29.5
S + R	4	0.4	15	2.2	11	0.6	22	1.1	22	9.1	11	5.2	14	10.1
S + C	75	8.3	159	23.7	84	4.9	632	31.7	127	52.7	62	29.4	12	8.6
R + C	1	0.1	19	2.8	125	7.2	17	0.9	5	2.1	6	2.8	22	15.8
S + R + C	347	38.5	247	36.8	438	25.3	447	22.5	8	3.3	86	40.8	40	28.8
Hormone Therapy (H)	2	0.2	-	-	31	1.8	25	1.3	-	-	-	-	1	0.7
S + H	34	3.8	2	0.3	37	2.1	57	2.9	-	-	-	-	-	-
R + H	-	-	1	0.1	7	0.4	1	0.1	-	-	-	-	1	0.7
C + H	5	0.6	1	0.1	14	0.8	22	1.1	-	-	-	-	-	-
S + R + H	17	1.9	2	0.3	34	2.0	42	2.1	-	-	-	-	-	-
S + C + H	41	4.5	16	2.4	128	7.4	197	9.9	-	-	1	0.5	-	-
R + C + H	-	-	1	0.1	93	5.4	8	0.4	-	-	-	-	-	-
S + R + C + H	307	34.0	70	10.4	668	38.6	339	17.0	-	-	1	0.5	3	2.2
Others	-	-	-	-	1	0.1	3	0.2	-	-	-	-	-	-
<b>All Treatments</b>	<b>902</b>	<b>100.0</b>	<b>672</b>	<b>100.0</b>	<b>1730</b>	<b>100.0</b>	<b>1991</b>	<b>100.0</b>	<b>241</b>	<b>100.0</b>	<b>211</b>	<b>100.0</b>	<b>139</b>	<b>100.0</b>
<b>Distant</b>														
Surgery (S)	1	0.5	1	1.8	1	0.4	2	0.7	2	8.0	-	-	-	-
Radiotherapy (R)	11	5.9	2	3.6	2	0.7	7	2.4	3	12.0	3	7.7	2	6.5
Chemotherapy (C)	43	23.2	24	43.6	54	19.1	91	31.3	11	44.0	30	76.9	12	38.7
S + R	3	1.6	-	-	-	-	-	-	2	8.0	-	-	-	-
S + C	16	8.6	13	23.6	5	1.8	14	4.8	4	16.0	3	7.7	-	-
R + C	10	5.4	7	12.7	39	13.8	21	7.2	3	12.0	2	5.1	6	19.4
S + R + C	24	13.0	5	9.1	8	2.8	7	2.4	-	-	1	2.6	9	29.0
Hormone Therapy (H)	8	4.3	1	1.8	12	4.2	25	8.6	-	-	-	-	1	3.2
S + H	1	0.5	-	-	1	0.4	-	-	-	-	-	-	-	-
R + H	9	4.9	-	-	3	1.1	5	1.7	-	-	-	-	-	-
C + H	30	16.2	-	-	82	29.0	62	21.3	-	-	-	-	1	3.2
S + R + H	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S + C + H	1	0.5	1	1.8	6	2.1	7	2.4	-	-	-	-	-	-
R + C + H	11	5.9	-	-	63	22.3	29	10.0	-	-	-	-	-	-
S + R + C + H	17	9.2	1	1.8	7	2.5	10	3.4	-	-	-	-	-	-
Others	-	-	-	-	-	-	11	3.8	-	-	-	-	-	-
<b>All Treatments</b>	<b>185</b>	<b>100.0</b>	<b>55</b>	<b>100.0</b>	<b>283</b>	<b>100.0</b>	<b>291</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>	<b>39</b>	<b>100.0</b>	<b>31</b>	<b>100.0</b>

**Table 10.8: Number (#) and Proportion (%) of Any Specific Treatment Relative to All Treated Patients According to Clinical Extent of Disease (2007-2011) - Female Breast (ICD-10: C50)**

	Mumbai		Bangalore		Chennai		Thi'puram		Dibrugarh		Guwahati		Chandigarh	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
<b>Localised</b>														
Any Surgery	419	33.8	128	41.4	134	31.8	663	37.6	3	75.0	23	41.8	-	-
Any Radiotherapy	296	23.9	59	19.1	80	19.0	259	14.7	-	-	15	27.3	2	66.7
Any Chemotherapy	306	24.7	101	32.7	103	24.4	557	31.6	1	25.0	17	30.9	-	-
Any Hormone Therapy	219	17.7	21	6.8	105	24.9	286	16.2	-	-	-	-	1	33.3
Any Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Procedures</b>	<b>1240</b>	<b>100.0</b>	<b>309</b>	<b>100.0</b>	<b>422</b>	<b>100.0</b>	<b>1765</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>	<b>55</b>	<b>100.0</b>	<b>3</b>	<b>100.0</b>
<b>Regional</b>														
Any Surgery	860	31.3	557	34.6	1425	26.4	1766	35.6	216	52.6	179	36.5	71	25.6
Any Radiotherapy	677	24.6	360	22.3	1378	25.5	846	17.1	50	12.2	113	23.1	83	30.0
Any Chemotherapy	809	29.4	601	37.3	1582	29.3	1686	34.0	145	35.3	195	39.8	118	42.6
Any Hormone Therapy	406	14.8	93	5.8	1012	18.7	660	13.3	-	-	3	0.6	5	1.8
Any Others	-	-	-	-	1	-	3	0.1	-	-	-	-	-	-
<b>Total Procedures</b>	<b>2752</b>	<b>100.0</b>	<b>1611</b>	<b>100.0</b>	<b>5398</b>	<b>100.0</b>	<b>4961</b>	<b>100.0</b>	<b>411</b>	<b>100.0</b>	<b>490</b>	<b>100.0</b>	<b>277</b>	<b>100.0</b>
<b>Distant</b>														
Any Surgery	63	16.7	21	23.3	28	4.8	38	7.9	8	23.5	4	8.5	9	16.1
Any Radiotherapy	85	22.5	15	16.7	122	20.7	75	15.6	8	23.5	6	12.8	17	30.4
Any Chemotherapy	152	40.3	51	56.7	264	44.9	229	47.5	18	52.9	37	78.7	28	50.0
Any Hormone Therapy	77	20.4	3	3.3	174	29.6	131	27.2	-	-	-	-	2	3.6
Any Others	-	-	-	-	-	-	9	1.9	-	-	-	-	-	-
<b>Total Procedures</b>	<b>377</b>	<b>100.0</b>	<b>90</b>	<b>100.0</b>	<b>588</b>	<b>100.0</b>	<b>482</b>	<b>100.0</b>	<b>34</b>	<b>100.0</b>	<b>47</b>	<b>100.0</b>	<b>56</b>	<b>100.0</b>
<b>Others</b>														
Any Surgery	3	100.0	2	22.2	1	50.0	-	-	2	66.7	-	-	-	-
Any Radiotherapy	-	-	1	11.1	1	50.0	-	-	1	33.3	1	50.0	-	-
Any Chemotherapy	-	-	4	44.4	-	-	-	-	-	-	1	50.0	-	-
Any Hormone Therapy	-	-	2	22.2	-	-	-	-	-	-	-	-	-	-
Any Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Procedures</b>	<b>3</b>	<b>100.0</b>	<b>9</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>	<b>-</b>	<b>-</b>