Results & Statistical Analysis

❖ *Six patients were evaluated few weeks following surgery (lumpectomy).*

- *Three patients out of six showed residual lesions associated by post operative sequalae.*
  Residual lesions were in the form of :-
  → *Densely enhancing irregular rim +/- nodulation.*
  → *Surrounding densely enhancing streaks infiltrating the surrounding parenchyma*
  → *S/I curve with malignant criteria.*

- *Two patients out of six showed post operative complications, with no residual lesions, in the form of seroma & hematoma.*

- *One patient out of six showed post operative changes with no complications or residual lesions. Post operative changes are in the form of distorted parenchymal architecture, thickened distorted overlying skin, retracted nipple & faintly enhancing parenchymal strands.*

❖ *Nine patients were evaluated about 18 months following operation & irradiation therapy.*

- *One patient out of nine showed residual lesion in the form of ill defined lesion with intense clumped enhancement & S/I curve & enhancement pattern with malignant criteria.*

- *Eight patients out of nine showed complete response in the form of:-*

→ *Seven patients had fibrosis at the operative bed (faintly enhancing strandy tissue).*

→ *One patient showed fairly defined area of diffuse faint enhancement at the operative bed with benign enhancement pattern & S/I curve.*

❖ ***Four patients were evaluated 9-12 months following operation (lumpectomy), irradiation & chemotherapy.***

- *All patients showed complete response.*
- *Two patients showed fibrosis & fat necrosis.*
- *One patient showed post irradiation necrosis (faint enhancing rim).*

❖ ***Seven patients were evaluated following chemo & irradiation therapy***

- *Four patients out of seven were evaluated 3 then 9 months following therapy*

→ *First evaluation showed residual mass with malignant criteria & enhancement pattern.*

→ *Second evaluation showed favorable response in the form of decrease size of the lesion & benign enhancement criteria.*

- *Two patients were evaluated 9 months following therapy:-*

→ *One patient showed complete response in the form of ill defined area of parenchymal distortion, faintly enhancing with benign S/I curve criteria.*

→ *The other patient showed partial response in the form of residual mass with malignant criteria, enhancement pattern & S/I curve.*

❖ **Four patients were evaluated 6-9 months following only chemotherapy**

- *One patient out of four was evaluated twice, 6 then 9 months following therapy & showed residual mass with malignant criteria & enhancement pattern.*

- *Three patients were evaluated 9 months following therapy & showed response to therapy in the form of necrosis.*

Results & Statistical Analysis

Mammo	N	%
-VE	10	33.33
+Ve	20	66.67
Total	30	100.00
Chi-square	X^2	3.333
	P-value	0.068

Table 1: Number of +ve & -ve cases by mammography & their percentage.

Mammography results

■ -VE ■ +Ve

33%

67%
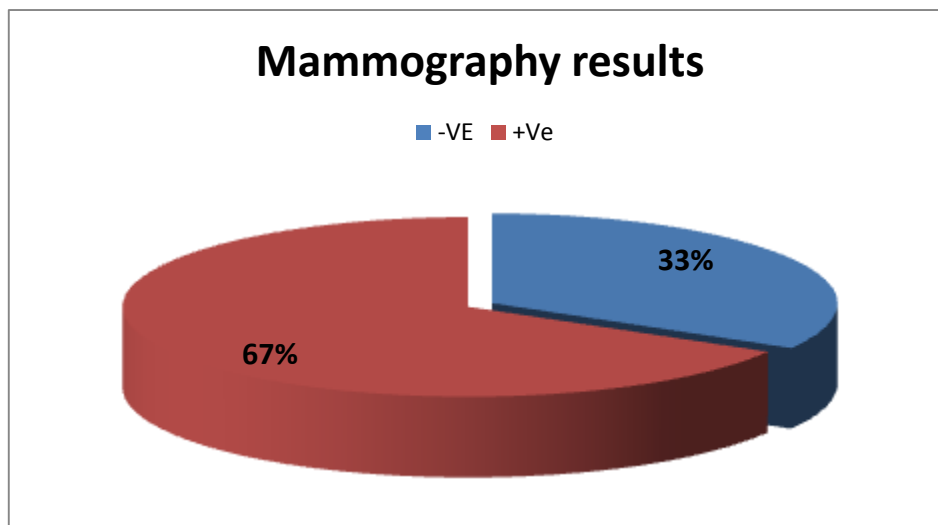
Pathology		N	%
-VE		19	63.33
+Ve		11	36.67
Total		30	100.00
Chi-square	X^2	2.133	
	P-value	0.144	

Table 2 : **Number of +ve & -ve cases by pathology & their percentage.**
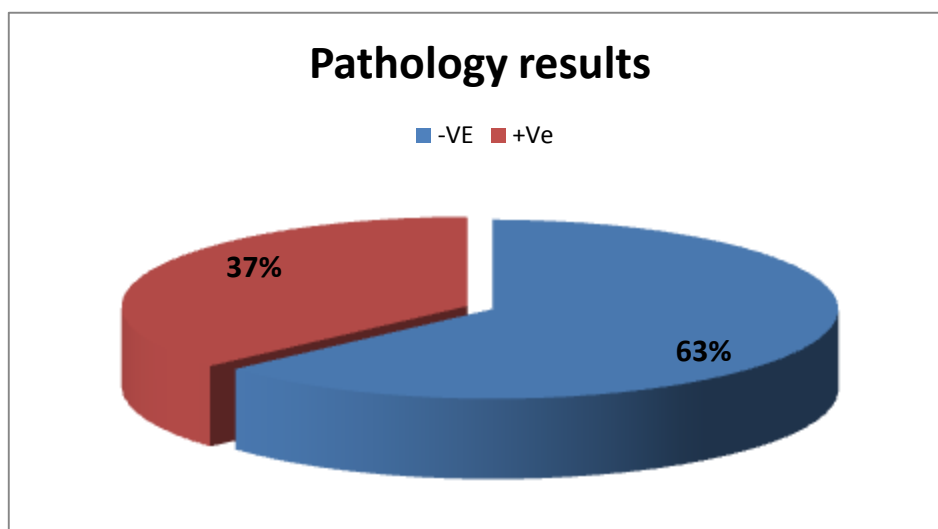
MRI		N	%
-VE		18	60.00
+Ve		12	40.00
Total		30	100.00
Chi-square	X^2	1.200	
	P-value	0.273	

Table 3: Number of +ve & -ve cases by MRI & their percentage.
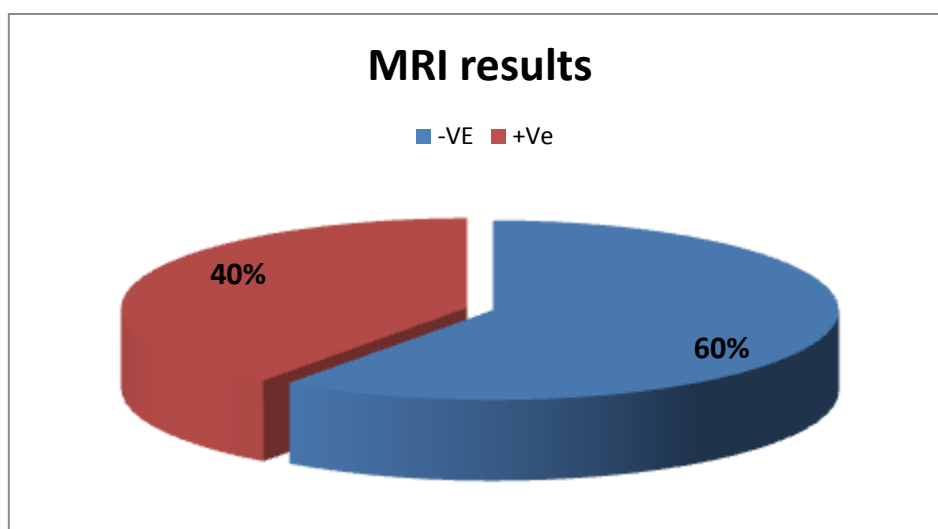
Therapy	N	%
Operation	6	20.00
Irradiation	2	6.67
Chemotherapy	6	20.00
Operation+Irradiation	7	23.33
Irradiation+Chemotherapy	5	16.67
All	4	13.33
Total	30	100.00
Chi-square	X^2	3.200
	P-value	0.669

Table 4: **Number of cases undergoing each type of therapy & their percentage.**
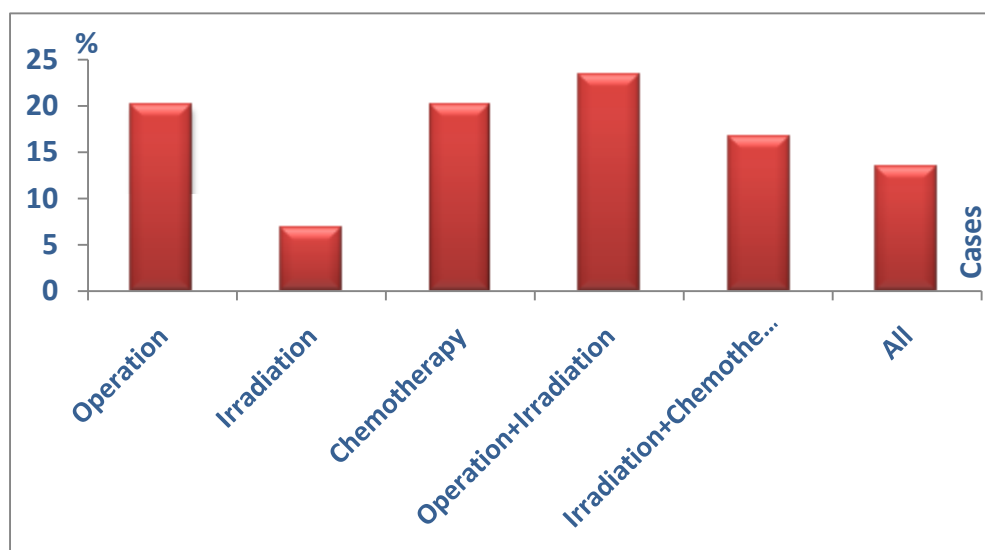
Age		
Mammo	**Range**	**Mean ± SD**
-VE	36.000 - 60.000	45.200 ± 9.659
+Ve	29.000 - 65.000	48.750 ± 8.485
T-test **T**	-1.032	
P-value	0.311	

Table 5: **Correlates mammography results to patients' ages**.
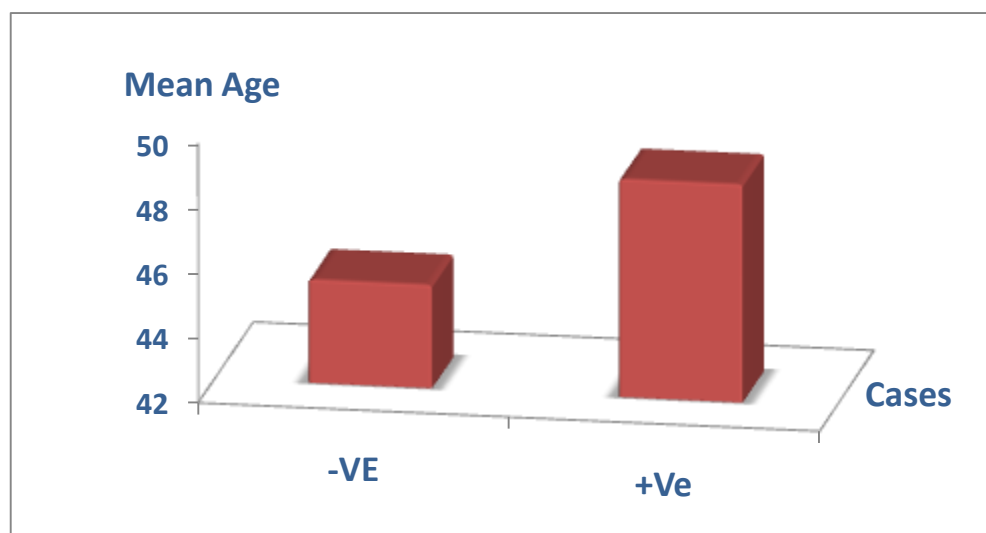
Age		
Pathology	**Range**	**Mean ± SD**
-VE	29.000 - 65.000	45.105 ± 9.055
+Ve	42.000 - 65.000	51.818 ± 7.083
T-test	**T**	-2.108
	P-value	0.044

Table 6: Correlates pathology results to patients' ages.
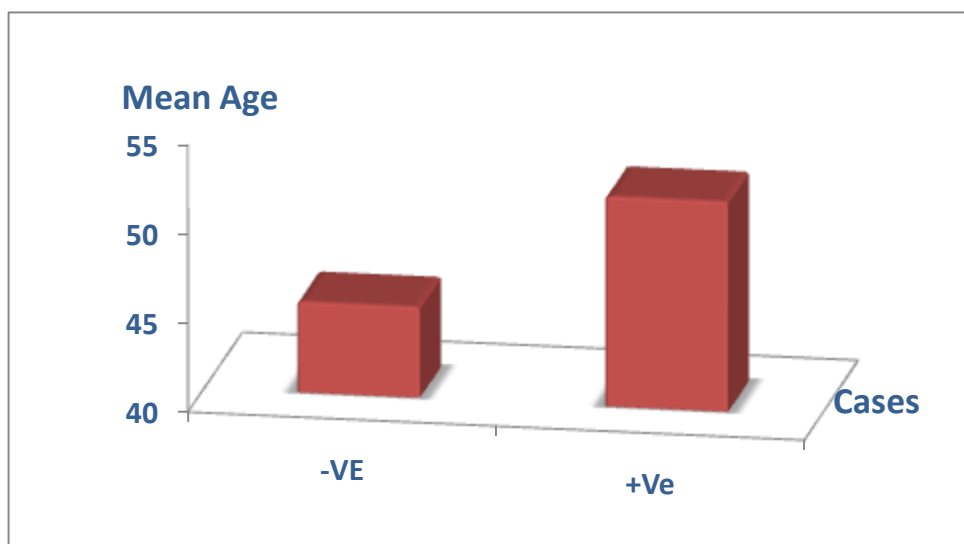
Age		
MRI	**Range**	**Mean ± SD**
-VE	29.000 - 65.000	45.222 ± 8.795
+Ve	37.000 - 65.000	51.083 ± 8.140
T-test **T**		-1.841
P-value		0.760

Table 7: Correlates MRI results to patients' ages.
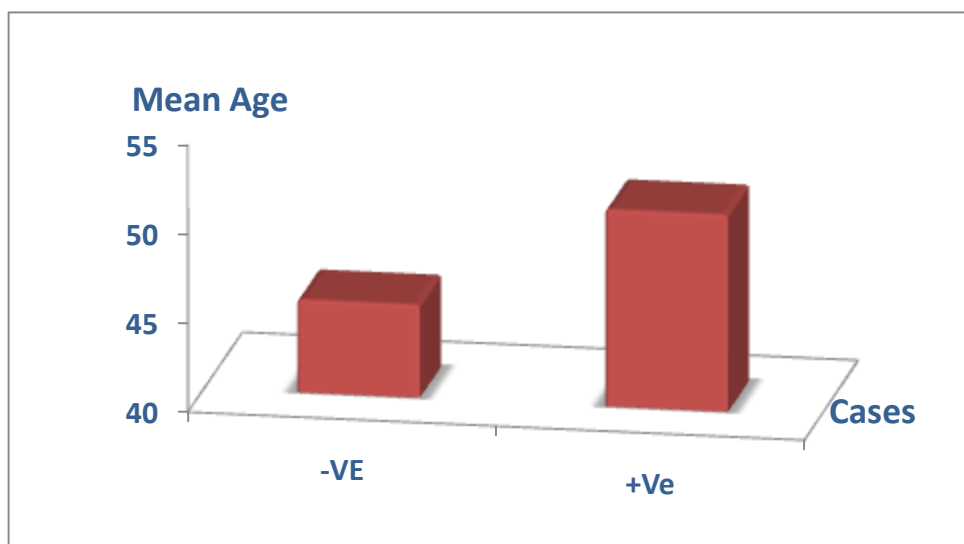
Mammo		Pathology		
		-Ve	+Ve	Total
-VE	N	9	1	10
	%	30.00	3.33	33.33
+Ve	N	10	10	20
	%	33.33	33.33	66.67
Total	N	19	11	30
	%	63.33	36.67	100.00
Sens.	Spec.	PPV	NPV	Accuracy
90.909	47.368	50.000	90.000	63.333

Table 8: **Correlates mammography results to pathology results (number & percentage).**
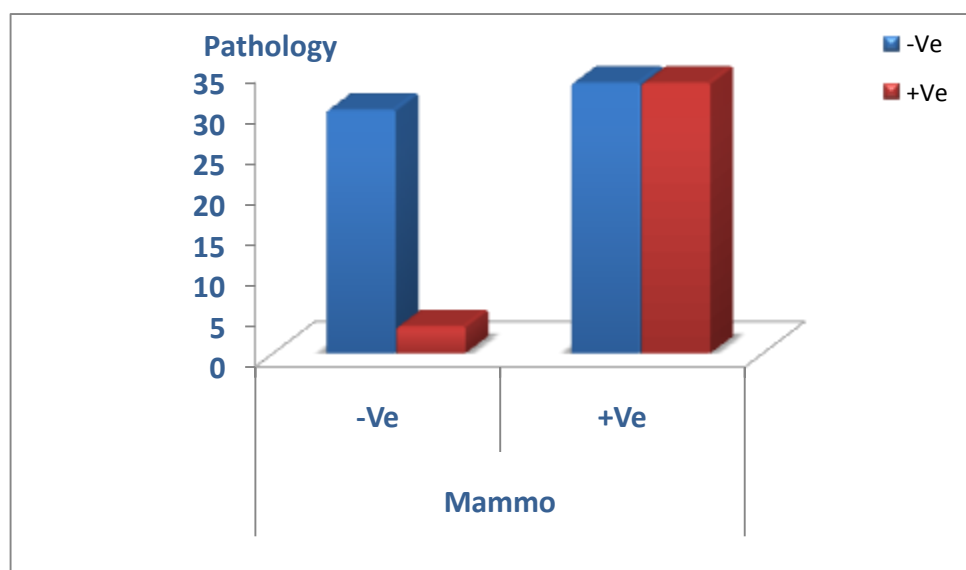
MRI		Pathology		
		-Ve	+Ve	
-VE	N	17	1	18
	%	56.67	3.33	60.00
+Ve	N	2	10	12
	%	6.67	33.33	40.00
Total	N	19	11	30
	%	63.33	36.67	100.00
Sens.	Spec.	PPV	NPV	Accuracy
90.909	89.474	83.333	94.444	90.000

Table 9: **Correlates MRI results to pathology results (number & percentage)**
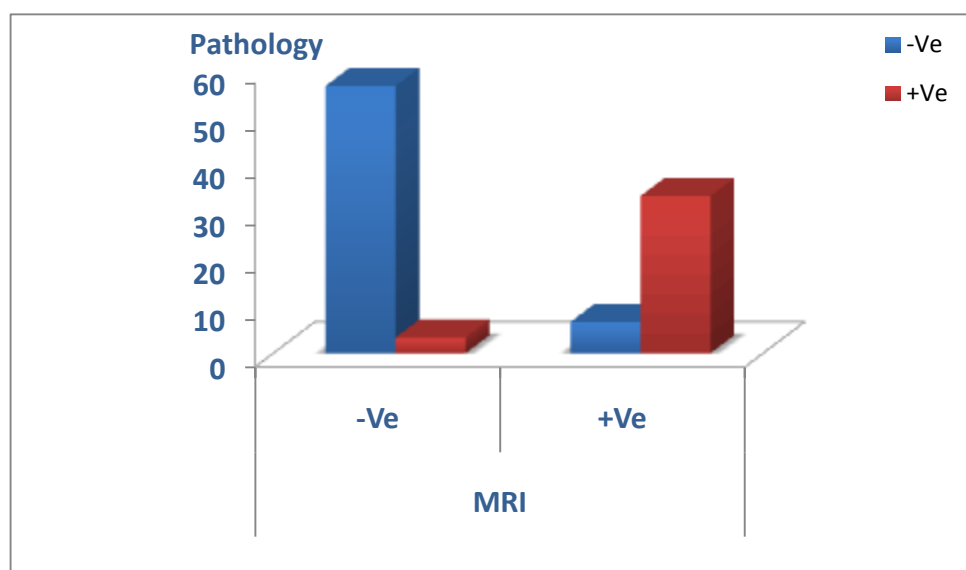
Mammo		MRI		
		-Ve	+Ve	Total
-VE	N	8	2	10
	%	26.67	6.67	33.33
+Ve	N	10	10	20
	%	33.33	33.33	66.67
Total	N	18	12	30
	%	60.00	40.00	100.00
Chi-square	X^2	2.500		
	P-value	0.114		

Table 10: Correlates Mammography results to MRI results (number & percentage).
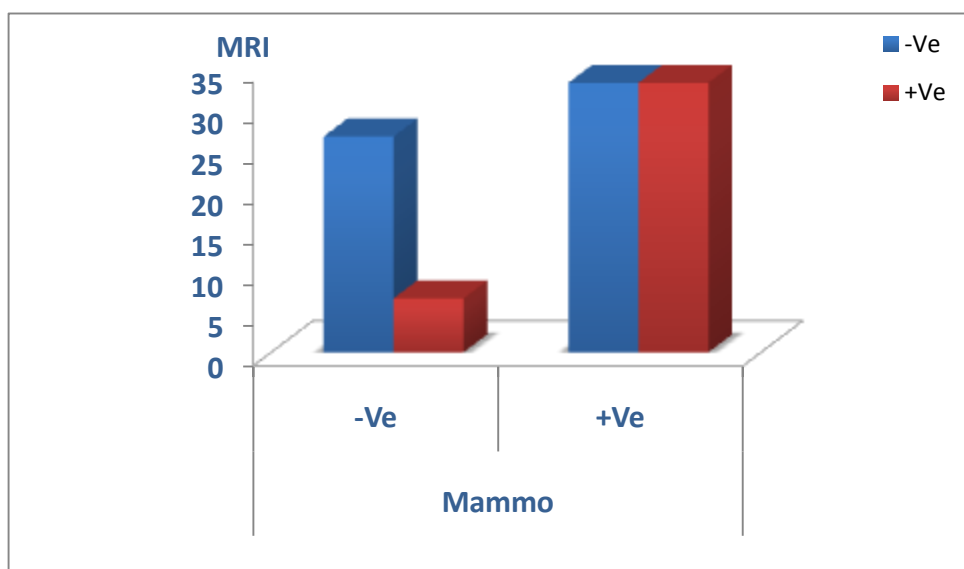
Therapy	Pathology					
	-Ve		+Ve		Total	
	N	%	N	%	N	%
Operation	4	13.33	2	6.67	6	20.00
Irradiation	1	3.33	1	3.33	2	6.67
Chemotherapy	4	13.33	2	6.67	6	20.00
Operation+Irradiation	5	16.67	2	6.67	7	23.33
Irradiation+Chemotherapy	2	6.67	3	10.00	5	16.67
All	3	10.00	1	3.33	4	13.33
Total	19	63.33	11	36.67	30	100.00
Chi-square	X^2	1.815				
	P-value	0.874				

Table 11: **Correlates pathology results to the type of therapy (number & percentage).**
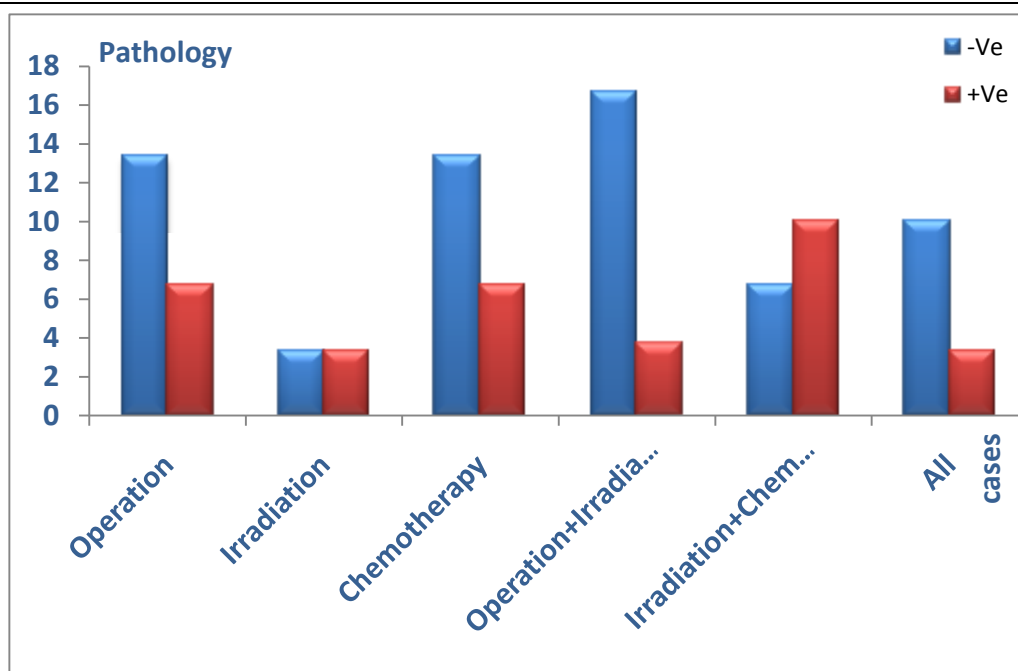
Therapy	MRI					
	-Ve		+Ve		Total	
	N	%	N	%	N	%
Operation	3	10.00	3	10.00	6	20.00
Irradiation	1	3.33	1	3.33	2	6.67
Chemotherapy	4	13.33	2	6.67	6	20.00
Operation+Irradiation	6	20.00	1	3.33	7	23.33
Irradiation+Chemotherapy	1	3.33	4	13.33	5	16.67
All	3	10.00	1	3.33	4	13.33
Total	18	60.00	12	40.00	30	100.00
Chi-square	X^2	6.081				
	P-value	0.298				

Table 12: Correlates MRI results to the type of therapy (number & percentage).
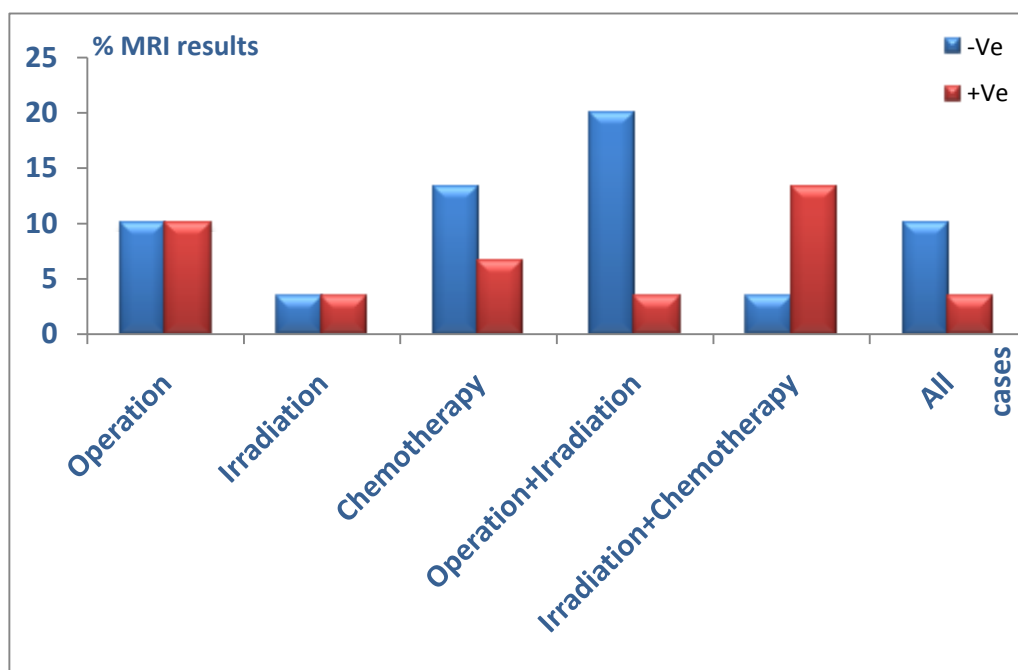
Therapy	Mammo					
	-Ve		+Ve		Total	
	N	%	N	%	N	%
Operation	2	6.67	4	13.33	6	20.00
Irradiation	1	3.33	1	3.33	2	6.67
Chemotherapy	0	0.00	6	20.00	6	20.00
Operation+Irradiation	5	16.67	2	6.67	7	23.33
Irradiation+Chemotherapy	2	6.67	3	10.00	5	16.67
All	0	0.00	4	13.33	4	13.33
Total	10	33.33	20	66.67	30	100.00
Chi-square X^2	12.674					
Chi-square P-value	0.027					

Table 13: **Correlates Mammography results to type of therapy (number & percentage).**