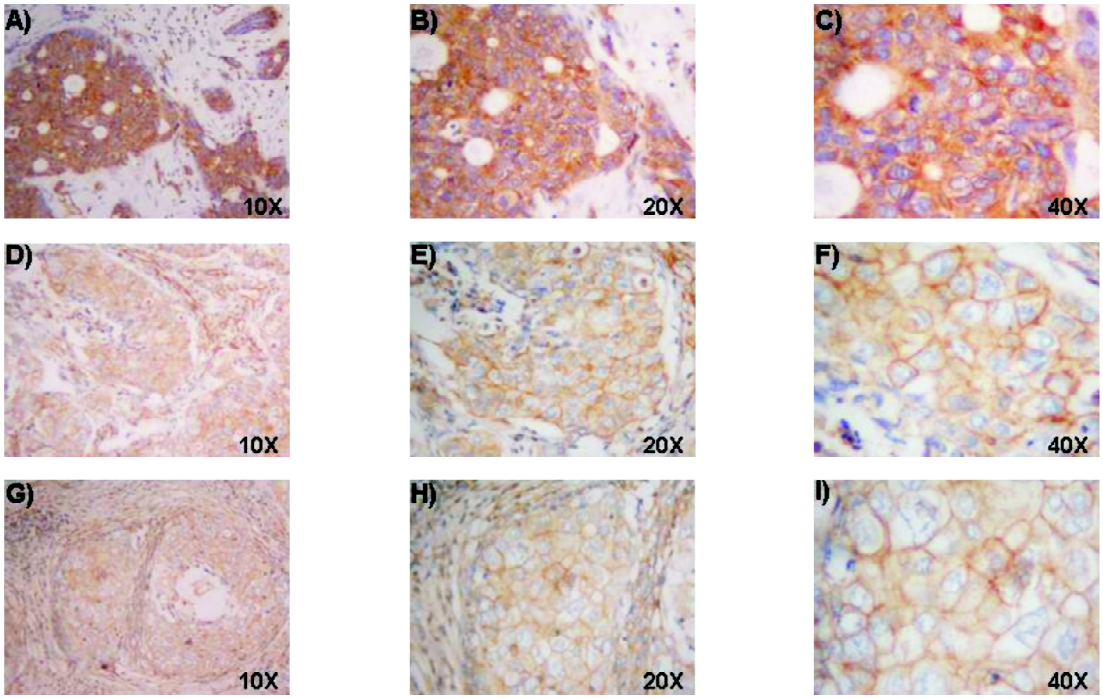

Panels A, B and C are staining with C494. Panels E, F and G are staining with C219 Panels G, H and I are staining with JSB1. P-glycoprotein positive staining is observed as brown staining localized to the cellular membrane.

Fig 1 Immunohistochemistry staining of breast cancer tissues with C494, C219 and JSB antibodies

MDR-1 Pgp expression and prognosis

The survival rate of the patients with MDR-1 Pgp expression detected by three antibodies is shown in Tab 3. The five-year survival rate was significantly lower in patients with MDR-1 Pgp expression positively detected by all three antibodies(JSB1, C494 and C219) than in those positively detected by either two of the three antibodies($P < 0.05$, Tab 3).

Tab 1 MDR-1 Pgp expression detected by JSB1, C219 and C494 and its relation to differentiation of breast cancer

Differentiation	JSB1				C219				C494			
	##	#	+	-	##	#	+	-	##	#	+	-
High	3	8	24	3	3	3	14	18	3	7	23	5
Median	1	2	19	3	2	1	7	15	3	2	18	2
Low	0	1	7	4	0	2	4	6	0	2	6	4

Tab 2 MDR-1 Pgp expression detected by JSB1, C219 and C494 and its relation to age and lymph metastasis

	JSB1				C219				C494			
	##	#	+	-	##	#	+	-	##	#	+	-
Age												
< 50(41)	2	7	26	6	4	3	11	23	6	7	23	5
⩾ 50(34)	2	4	24	4	1	3	14	16	0	4	24	6
Lymph metastasis												
+(9)	2	3	4	0	1	1	3	4	1	2	6	0
-(66)	2	8	46	10	4	5	22	35	5	9	41	11

Tab 3 MDR-1 Pgp positive cases and survival rates

Positive detection by antibodies	One-year	Three-year	Five-year
C494+JSB1	77.78%	66.67%	55.56%
C219+C494	100.00%	66.67%	66.67%
C219+JSB1	100.00%	100.00%	50.00%
C494+C219+JSB1	60.00%	40.00%	20.00%

DISCUSSION

It is well established that expression of MDR-1 Pgp is the major mechanism of multidrug resistance(MDR) in cancer cells and/or tissues and leads to failure of cancer chemotherapy[1-5,10,11]. A number of studies have shown that MDR-1 Pgp expression is associated with a poor prognosis in some tumors, such as neuroblastoma, soft tissue sarcoma, and acute myeloid leukemia[10-14]. Several methodologies have been used to detect *mdr-1* expression at the mRNA level(such as RT-PCR, *in situ* RT-PCR) and MDR-1 Pgp expression at the protein level (immunohistochemistry, Western blot) in cancer cells and/or tissues. Among those, immunohistochemistry is commonly used in clinical pathology. However, one antibody is usually used in immuno-histochemistry staining. Since each protein has many different antigenic epitopes and the exposure of these epitopes may be different upon tertiary structure of the protein and post-fixation of the tissue, one antibody may have false positive or negative staining. Therefore, multiple antibodies for detecting a specific protein by immunohistochem-