UNIVERSITI TEKNOLOGI MARA
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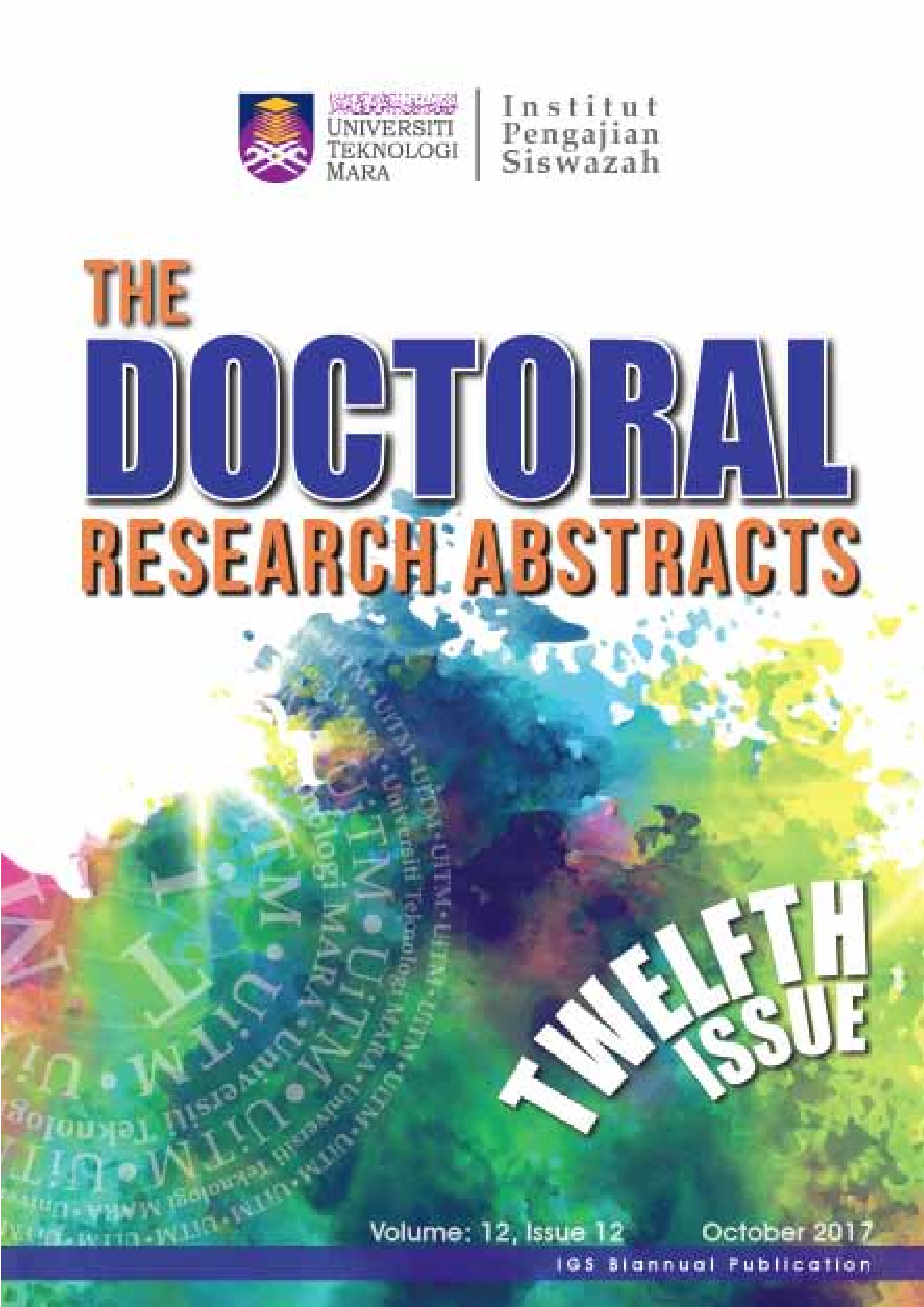
THE DOCTORAL RESEARCH ABSTRACTS



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Title : p53 PROTEIN EXPRESSION AND RISK FACTORS IN BREAST CANCER – A RETROSPECTIVE STUDY

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Numerous studies showed that overexpression of p53 protein may be involved in a variety of human malignancies including breast cancer. In breast cancer patients, a mutated p53 gene that encodes the p53 protein is associated with a higher risk of carcinogenesis and this study examine the potential role of p53 status in breast cancer tissues, specifically its association to established risk factors race, age, age at menarche, hormonal factors and cancer grade. The immunohistochemistry (IHC) technique was used to detect overexpression characteristics of p53 protein and the immunohistochemical results were compared with established risk factors. Analysis conducted on 111 breast tissues showed 40% (44/111) positive p53 (+) protein and 60% (67/111) non-expression p53 (-) respectively. Malay occupied nearly half the number of respondents for overexpressed and nonexpression of p53 (+,-) protein (n=53, 48%) followed by Chinese (n=30, 27%) and Indian (n=28, 25%) with no significant difference (p> 0.05). Overexpression of p53 (+) protein occurred in 37% (41/111) of the premenopausal age group above 40 years old and 3% (3/111) in the age group less than 40 years old (p> 0.05). The probability of p53 (+) protein being overexpressed in the age group less than 40 years old is 0.66 RR 0.665(CI :0.246-1.796) times less likely compared to age group above 41 years old. More than half of the women 66.7% (74/111) experienced menarche at age <13 years old. The odds OR 4.509(C.I 1.746-11.644) of overexpressing p53 (+) protein are 4.5 times more likely in menarcheal age group <13 years old compared to >13 years old. Overexpression of p53 (+) are 4.4 times more likely (OR4.363, C.I 1.44-6.848) when both hormonal receptors are positive [ER (+) PR (+)]. Women diagnosed with grade 3 breast tumours are likely to overexpressed p53(+) protein 2.8 times more (OR 2.799 C.I 1.728-11.014) than women diagnosed with breast tumour grade 1 and 2 which explained the elevated number of high risks women with poor prognosis. In conclusion, secular trend influence by early life physiological events in breast development at menarcheal age may presumably had implications in breast cancer incidence with the increased risk associated with p53(+) protein within this age group. Increased risk in coexpression [ER (+) PR(+) p53(+)] including higher grade tumours and p53(+)characterized a subgroup of patients with clinical implication. Inclusion of p53 in routine diagnostic evaluation and primary assessment may provide additional information or early evidence of predictive and prognostic significance in diagnosis, and may ultimately influence the therapeutic algorithm of premenopausal women with breast cancer.