Sudan University of Science and Technology
College of Graduate Studies

Assessment of Serum vitamin D levels and Vitamin D Receptors Gene Polymorphisms Among Sudanese Females with Breast Cancer Attending Radio Isotope Center Khartoum

A Thesis Submitted for the Fulfillment of the Requirements of Ph.D Degree in Clinical Chemistry

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بسم الله الرحمن الرحيم

قال الله تعالى:

(ربّنا كَأَتَّوَاهَا إِن نَّسِينَا أَوْ أَخْطَأْنَا)

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Chapter one
Chapter Two
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Questionnaire
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No.: ........................
Age/ years: ................. Residence........................
Marital status:............... Education status.....................
Occupation status:..............
Height/cm...................... Wight/ Kg..................
Parity........................ Onset of breast cancer ..................

Laboratory investigation:

Vitamin D level..............ng/mL

Genotyping of VDR

<table>
<thead>
<tr>
<th>VDR polymorphisms</th>
<th>Genotypes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VDR-Fok1</td>
<td></td>
</tr>
<tr>
<td>VDR-Taq1</td>
<td></td>
</tr>
<tr>
<td>VDR-Bsm1</td>
<td></td>
</tr>
<tr>
<td>VDR-Apa1</td>
<td></td>
</tr>
</tbody>
</table>

Appendixes (1)
Appendices