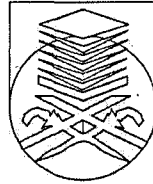


**VISUALISATION OF URIC ACID RENAL CALCULI
USING COMPUTED RADIOGRAPHY.**



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| Kos Yang diluluskan | : RM 19,000.00 |
| Jenis Geran | : Geran Dalamann |

Sekian, terima kasih.

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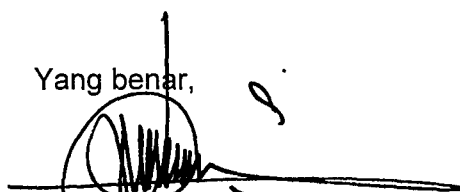
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**LAPORAN AKHIR PENYELIDIKAN "VISUALISATION OF URIC ACID RENAL
CALCULI USING COMPUTED RADIOGRAPHY"**

Merujuk kepada perkara di atas, bersama-sama ini disertakan 2 (dua) naskhah Laporan Akhir Penyelidikan Bertajuk "Visualisation Of Uric Acid Renal Calculi Using Computed Radiography" oleh kumpulan Penyelidik dari Fakulti Sains Kesihatan untuk makluman pihak tuan.

Sekian, terima kasih.

Yang benar,



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Ketua

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ABSTRACT

In conventional radiography, uric acid renal calculi (UARC), when pure, are radiolucent due to its low atomic numbers, and impossible to be visualized on plain KUB x-ray examination. Although can be excreted, they tend to recur and can attain a 'staghorn' configuration, which can cause severe complication and can result in acute renal failure. Further investigations are then will become more complicated which requires vast time and effort.

This study is concerned with the utilization of Computed Radiography (CR) parameters to visualize them on radiographic images. Its degree of visibility on different tissue thickness and 'patient-equivalent phantom - PEP' were being examined. Optical Density mean values are, $A1 = 0.407$ and $A2 = 1.215$. During performing the CR image processing, negative values of GA (-3.8 to -4.0) and GS (-1.30 to -1.43) were being used. As a result, uric acid renal calculus has been visualized as a 'sharp-black spot' on reversal radiographic image.

The findings of the study can help to shorten the time taken in imaging stage, moreover, in making decision on further management and to provide appropriate treatment. Successfully visualized UARC on radiographic image, as early as after plain KUB will dramatically changed the management of renal and ureteral calculous disease.