

UNIVERSITI TEKNOLOGI MARA

**UTILIZATION OF
CHEMOTHERAPY REGIMEN FOR
ACUTE MYELOID LEUKAEMIA
PATIENTS IN AMPANG HOSPITAL**

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Dissertation submitted in partial fulfillment of the
requirement for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of University Technology MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledge as referenced work. This dissertation has not been submitted to any other academic institution or non-academic institution for any degree of qualification.

I, hereby, acknowledge that I have been supplied with Academic Rules and Regulations for Post Graduate, University Technology MARA, regulating the conduct of my study and research.

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ABSTRACT

Cancer is a primary cause of morbidity and mortality worldwide. In Malaysia, cancer was among the top five causes of death in the Ministry of Health (MOH) hospitals. Over the past 20 years, leukaemia treatments have advanced rapidly. Acute Myeloid Leukaemia (AML) is one of the most common and acute diseases among different types of leukaemia. Due to increased number of AML cases and high cost of treatments, drug utilization evaluation of AML is important for allocation of healthcare resource. This is a retrospective drug utilization study of chemotherapy regimen for AML patients in Ampang Hospital. Patient's data were extracted from electronic Health Information System known as e-HIS system. The objective of the study is to describe the utilization of chemotherapy regimen drugs for AML patients. The specific objectives for this study are to describe characteristic of AML patients, to identify types of chemotherapy regimen drugs used in AML patients, to identify side effect of chemotherapy used and to examine the complete remission (CR) rate and overall survival for AML patients. A total of 133 records were retrieved with the median age of 41 years old ranged from 13 to 74 years old. The most commonly prescribed induction regimen was DA regimen. The most commonly used consolidation chemotherapy was HIDAC regimen and for salvage chemotherapy was FLAG-Ida regimen. Total of 108 patients had achieved CR with duration between 0.5 to 79 months and median of 17 months. Of the 108 patients achieved CR, 39 patients relapsed at a median of 9 months, 22 patients died in CR at a median of 5.5 months and 47 patients remain alive in CR1 with a median of 34 months. Regardless of the age, gender and ethnicity, the regression result showed that only transplant had a significant effect to the CR ($P < 0.05$) and increased odds of CR by 2.8 times than AML patients who are not undergo transplant. Total of 83 AML patients had died during the study period (62.4%). Regardless of the age, gender and ethnicity, only CR had a significant effect to the mortality ($P < 0.05$). AML patients who achieved CR have decreased odds of mortality by 66% than AML patients who are not achieved CR. Overall survival (OS) rate at 2 years was 28.6% and OS rate at 5 years was 9%. The median OS was 20 months (95% CI: 15.4 to 24.6 months). There was clinically significant difference of median OS between transplant patients and non-transplant patients with the p-value < 0.05 . From this study, the regression result showed that AML patients who achieved CR have increased odds of survival by 2.93 times than AML patients who are not achieved CR. From this study, all chemotherapy regimens in either induction phase, consolidation phase or salvage phase have been used in accordance with their appropriate indications and follow the international guideline. These results should increase understanding of chemotherapy utilization pattern in making evidence based decision among physician and pharmacist.

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