**Journals**

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**Methods**

Sickle cell data was extracted from Sylvanus Olympio teaching hospital department of Obstetrics and Gynecology between 2012 and 2014. Our variables of interest were type of sickle cell at the hemoglobin electrophoresis analysis, hospitalization duration or time before death occurred for dead patients, delivery mode, use of heparin in the post-partum, vital status at the end of the hospitalization. The survival time was obtained by subtracting the release date from hospital from the admission date. For deceased patient, the survival time was the time before death and for the good outcome patients, the survival time was the time before release from hospital. The sickle cell type was whether hemoglobin SC or SS; the delivery mode was vaginal delivery or cesarean. The vital status was dead or alive at the end during the hospitalization. In the department, heparin use for prevention was 0.7 UI per day for 7 days staring 12 hours after the delivery.

The variables were coded as follows, sickle cell type SC was 0 and SS, 1; vaginal delivery was coded 0 and cesarean was coded as 1; use of heparin was coded as 1 and no use of heparin was coded 0; deceased was coded 0 and alive was coded as 1. The survival time was in days.

Descriptive statistics were computed for all variables by vital status

Results

Next, Kaplan-Meier survival curves were created followed by the log rank test32 to compare differences in the survival time distribution across the following factors: age at diagnosis, sex, cancer stage, metro and non-metro, and race. Cox proportional hazard regression modelling was conducted to examine the strength of association between the covariates and survival time. The proportionality of the covariates was then tested by adding an interaction term between time and the variable of interest.33 If the interaction term resulted in a p-value less than 0.05, the interaction term was kept in the model to incorporate the non-proportionality. In the final model only variables significant at a p<0.20 were eligible for inclusion and interactions between the covariates were assessed at an alpha of 0.05. Stratification by one of the covariates involved in the interaction or inclusion of the interaction term in the model were used to take the interaction into account. All analyses were conducted using SAS® 9.4.