

34<sup>th</sup> Euro-Global Summit on **Cancer Therapy & Radiation Oncology**  
&  
6<sup>th</sup> International Conference on **Big Data Analysis and Data Mining**  
&  
13<sup>th</sup> International Conference on **Orthopedics, Arthroplasty and Rheumatology**  
July 25-27, 2019 London, UK

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### **Albumin as a predictor of total joint arthroplasty complications: A systematic review**

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**Introduction:** Previous studies have looked at albumin, the surrogate for nutrition, describing whether low albumin levels lead to higher rates of complications. There have been no systematic reviews prior to this one which has gathered all the literature to describe how albumin and perioperative complications are related. The aim of this research project is to see if, based on the data currently available, low albumin levels are associated with higher perioperative complications. The purpose of the paper, based on these results, is to pose the question: if low albumin is associated with higher perioperative complications, should patients with low albumin levels be offered elective total joint arthroplasties (TJAs)?

**Method:** Searching through three databases, keywords including total joint arthroplasty, total knee arthroplasty, total hip arthroplasty, total joint replacement, total hip replacement, total knee replacement, TJA, TKA (total knee arthroplasty), THA (total hip arthroplasty) was where articles were found to include in the systematic review. Systematically, the articles were sifted through for relevancy to the question of interest. A biostatistician used statistical software to analyze the data.

**Results:** The results show hypoalbuminemia is significantly associated with perioperative complications, such as higher mortality, surgical site infection, pneumonia, revision for septic indication, revision for aseptic indication, any complication, among other complications.

**Conclusions:** The results show low albumin leads to statistically significantly higher risks of perioperative complications when compared to patients with normal albumin. Therefore, it may be important for surgeons to use albumin to screen patients during the perioperative period in order to determine those most at risk for surgical complications. If low albumin is found after the screening, it may be necessary to postpone surgery until nutrition is optimized. Following this thought, should patients with low albumin be allowed to undergo elective joint replacement?

### **Biography**

Chukwuemeka Mbagwu is a general surgery preliminary intern who is committed to orthopaedic surgery. He is a graduate of Howard University College of Medicine and is currently training at Mt Sinai Hospital in Manhattan, NY. His research has been presented at the National Medical Association and the Eastern Orthopaedic Association.

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