



# AUDIT OF NATIVE ARTERIO-VEIN FISTULA CREATION IN HOSPITAL TUANKU JAAFAR SEREMBAN, HTJS

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## Introduction

Arterio-Venous Fistula (AVF) is the preferred method of vascular access for patients with kidney failure(1). The aim of this audit is to look into the success of the creation of fistula and cancellation rate at Hospital Tuanku Ja'afar Seremban, Negeri Sembilan for year 2023.

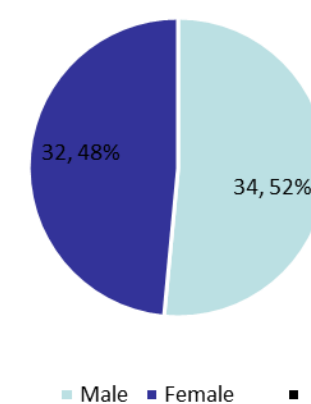
## Methods

Data was collected from operative records of patients who had native AVF creation from January 2023 till December 2023. Epidemiological information's such as age, gender, types of AVF and pre-operative availability of ultrasound vein mapping were obtained. Rate of successful and cancellation rate were measures.

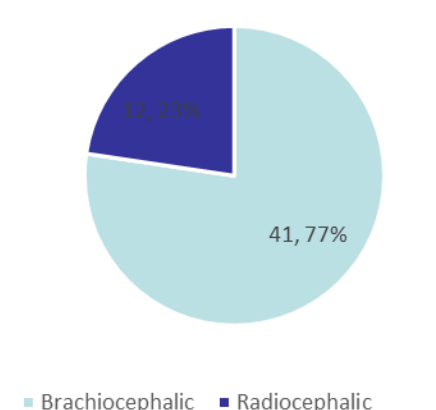
## Results

This audit shows 83 cases are listed for AVF creation from January 2023 till December 2023. 17 cases (20%) were cancelled due to various reason including preoperative high blood pressure, followed by non-suitable vein and sign of infection. Based on the data collected, total of 53 (80.3%)cases are successful against 13 (19.7%) unsuccessful cases. Within this audit, it can be concluded that AVF Creation In Hospital Tuanku Ja'afar have a acceptable successful rate even with significant cancellation rate.

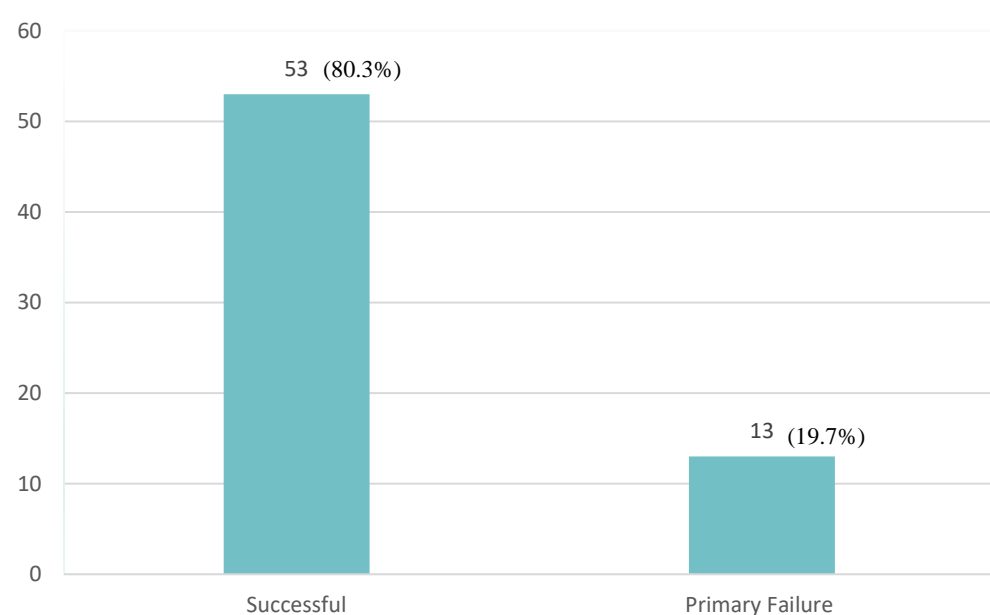
Demographic data



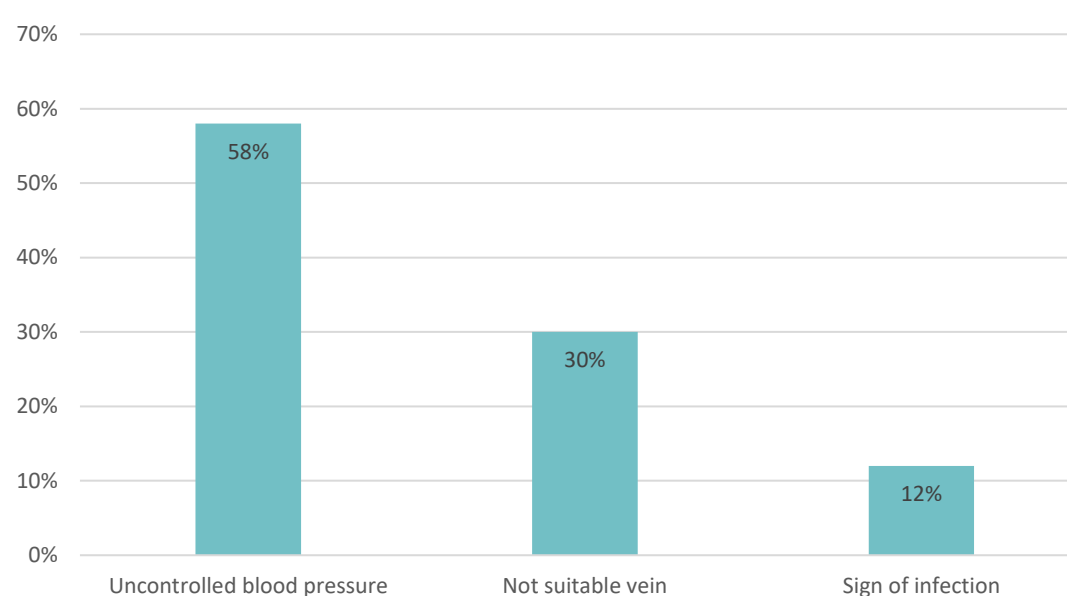
AVF Creation



Success rate for AVF Creation



Reason of cancellation



## Discussion

There has been an increased number of patients with end-stage renal disease (ESRD) worldwide including Malaysia that leads to the high demand for hemodialysis (2). Arteriovenous fistulas (AVF) are the gold standard vascular access for chronic hemodialysis treatment because of lower risks of complications associated with long-term use compared to arteriovenous grafts (AVG) and permanent cuff catheters (2). Our center is still young in embarking onto fistula creation, in which most of our cases are did by general surgeon that direct or indirectly trained by vascular surgeon in fistula creation. Strict patient selection criteria and upper limb ultrasound mapping were followed to ensure acceptable success rate. Audit shows significant cancellation rate due to various reason. Main reason is poor preoperative management of hypertension in which skews our result towards significant cancellation rate. Poor compliant among patient towards their antihypertensive medication contribute towards poor preoperative blood pressure management.

## Conclusion

Our center had acceptable success rate with significant cancellation rate. Strict selection criteria followed to ensure significant success rate. Collaboration with nephrologist are needed in preoperative optimization towards reduction in cancellation rate.

## References

1. National Kidney Foundation Kidney Disease Outcomes Quality Initiative: 2006 update vascular access. Guideline 2: Selection and placement of hemodialysis access. *Am J Kidney Dis* 48: S192–S200, 2006.
2. Nguyen, B., Duong, M.C., Diem Tran, H.N. *et al.* Arteriovenous fistula creation by nephrologist and its outcomes: a prospective cohort study from Vietnam. *BMC Nephrol* 24, 88 (2023). <https://doi.org/10.1186/s12882-023-03123-3>
3. Bylsma LC, Gage SM, Reichert H, Dahl SLM, Lawson JH. Arteriovenous fistulae for Haemodialysis: a systematic review and Meta-analysis of Efficacy and Safety Outcomes. *Eur J Vasc Endovasc Surg.* 2017;54(4):513–22.