

# Collaborative organ sharing in the Middle East: The United Arab Emirates - Kuwait Liver Transplant experience

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# Introduction

- Transplantation in the United Arab Emirates (UAE) was established in accordance with the provisions indicated in the Federal Decree Law No. 5 of 2016 on Regulation of Human Organs and Tissue Transplantation, with subsequent confirmation of the legal definition of brain death in May 2017
- Collaborative organ sharing programs in Europe have highlighted the impact of cross-border organ allocation in enabling optimal utilization of deceased donor organs
- We summarize the outcomes from our organ sharing collaboration with Kuwait and highlight its impact in meeting the needs of our patients

# Methods

- In the Middle East Gulf region, there is a scarcity of established programs in deceased organ donation
- Apart from the UAE and KSA, few other countries in the region have established programs in deceased organ donation
- This presented a unique opportunity to establish a collaborative organ sharing agreement to optimize utilization of deceased donor organs in the region and improve access to liver transplant (LT)

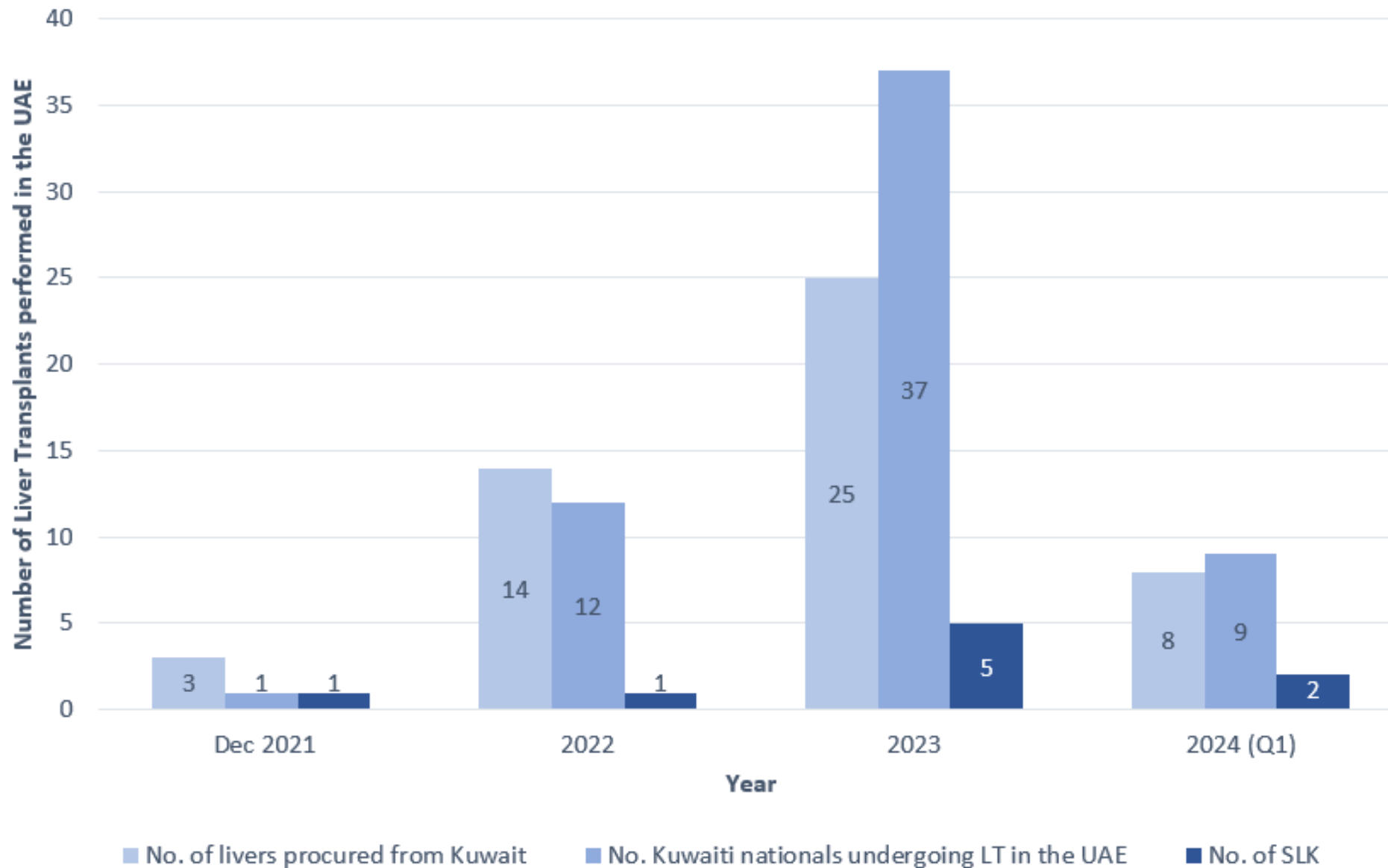
# Methods

- A successful organ sharing agreement was initiated with Kuwait in December 2021, that has since grown significantly and provided timely access to Kuwaiti nationals in need of LT
- Recipients from the UAE and Kuwait are listed on a common waitlist with prioritization based on the MELD-based organ allocation policy
- All LT as part of this collaborative initiative were performed at Cleveland Clinic Abu Dhabi, the nation's only multi-organ transplant center

# Results

- From Dec 2021 - Q1 2024, we successfully procured 50 livers and 9 kidneys from deceased organ donors in Kuwait and transplanted 59 Kuwaiti nationals – including 9 simultaneous liver-kidney transplants
- Metabolic dysfunction associated steatotic liver disease was the primary driver of the need for LT
- Among Kuwaiti nationals transplanted at CCAD, one year liver allograft survival is 94.8% (95% CI: 80.8 – 98.7), with 1-year patient survival of 97.4% (95% CI: 83 – 99.7)
- This model has since been successfully extended to include pancreas and thoracic organ transplantation as well

## UAE – Kuwait Liver Transplant Collaboration: Dec 2021 – Q1 2024



<b>UAE - Kuwait Liver Transplant Collaboration Dec 2021- Q1 2024</b>	<b>n (%)</b>
No. of livers procured from Kuwait	50
No. of kidneys procured from Kuwait*	9
No. of LT performed on Kuwaiti nationals	59
DDLT: LDLT	57: 1
Liver re-transplant	1
Simultaneous Liver-Kidney Transplant	9
Male: Female	37 (63) : 22 (37)
Median Age (range)	58.7 (19-73)
Median BMI (range)	28.9 (18-46)
Median MELD at transplant (range)	18 (9-40)
Etiology of Liver Disease:	
MASLD	39 (66)
Autoimmune Liver Disease	7 (12)
Chronic viral hepatitis	4 (7)
Alcohol-associated liver disease	5 (9)
No. of wait-listed candidates from Kuwait	14

\* All kidneys procured for simultaneous liver-kidney transplant

# Conclusions

- To summarize, six years after initiating LT, while the UAE has emerged as a regional leader in deceased organ donation, enhanced regional collaboration has helped meet the needs of patients in the region, while also promoting awareness of deceased organ donation
- Lessons learnt from this successful collaborative partnership could potentially be expanded to other nations in the region that lack established infrastructure to support deceased organ donation