Conclusions: ChatGPT exhibited moderate to high accuracy in identifying food items with high or low potassium and phosphate content in a renal diet. ChatGPT's precision was higher for identifying food items with high potassium or phosphate content than those with low content. The overall concordance between two ChatGPT sessions was high, indicating ChatGPT's consistency in producing results. Further research is required to optimize its performance and maximize its potential as a clinical tool.

PUB057

Exploring the Use of Artificial Intelligence (AI) and Machine Learning in Nephrology Research: A Bibliometric Analysis

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Background: Artificial intelligence (AI) and machine learning (ML) have increasingly been integrated into the field of nephrology in recent years. This study aimed to identify the most productive authors, institutions, and countries in this field, examine publication trends and patterns, and investigate the impact of collaboration on citations.

Methods: The study utilized the Science Citation Index Expanded (SCI-EXPANDED) of Clarivate Analytics Web of Science Core Collection to search for AI and machine learning publications related to nephrology from 1992 to 2021. The authors used quotation marks and Boolean operator "or" to search for keywords in the title, abstract, author keywords, and Keywords Plus. The 'front page' filter was applied to exclude nonresearch articles. A total of 5,425 documents were identified and analyzed.

Results: The results showed that articles represent 75% of the analyzed documents, with an average authorship ratio of 7.4 and an average number of citations per publication in 2021 of 18. English articles had a higher citation rate than non-English articles. The USA was preeminent in all publication indicators, followed by China (**Figure**). Collaborative research was found to enhance citations in the field.

Conclusions: This study provides a comprehensive analysis of the use of AI and ML in nephrology research publications from 1992 to 2021. Collaborative research was found to be important in advancing the field, and the study highlights research foci and frequently used author keywords. These results can guide researchers and practitioners in identifying key areas of research and advancing the use of AI and ML in nephrology research.

Figure. Development trends of the top five productive countries (TP: number of articles contain the



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Is Shared Decision-Making for Hemodialysis Adequate? The Rationale and Design of a Clinical Trial to Evaluate Video-Assisted Electronic Consent for Hemodialysis

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Background: Current methods of informed consent have repeatedly been demonstrated to be inconsistent and inadequate. We hypothesise that quality informed consent improves decision-making and is key to preparing patients for hemodialysis (HD). Study aims: To demonstrate that video-assisted electronic consent (eConsent) (intervention) compared to standard paper-based consent (control) improves patient experience, with better comprehension, reduced anxiety, increased satisfaction, less decisional regret, and improved adherence.

Methods: This is a multi-center, open label, randomized controlled trial (RCT). Participants: Incident and prevalent adult HD patients randomised 1:1 to either the intervention or the control groups. Intervention group: Participants will be coached to an online platform that delivers a simple-to-understand video animation followed by a knowledge questionnaire prior to signing an eConsent form to receive HD. The animation, co-designed with consumers, will consist of human figures role-playing a patient-doctor interaction. Control group: Participants will be consented by a clinician and sign a paper form. All groups will have any questions answered by a clinician prior to consent. Figure 1 depicts the RCT design and outcomes of interest.

Results: This RCT outcomes directly address patient experiences in the decisionmaking processes for HD. It will also standardize the content of complex HD health information, which may impact in decision-making and patient satisfaction.

Conclusions: If video-assisted eConsent is proven superior to the existing consent process, this RCT will serve as a proof-of-concept for changes in nephrology.



Figure 1: CONSORT flow diagram of the study protocol. Data collection will occur at informed consent (T1) and after 12 months (T2). <u>Primary outcomes</u>. Patient reported experience measure (modified Kidney PREM) and patient comprehension measured using an 18-point questionnaire previously published. <u>Sacondary outcomes</u>. Validated decision regert scale, patient anxiety levels (sixitem short form of the Spielberger State-Trait Anxiety Inventory), patient satisfaction (five-point Likert scale), compliance to renal care (attendance to HD and outpatient clinic appointments), dialysis continuation/withdrawal, changes in treatment modality, time taken to consent and participants' qualitative feedback.