

# Are Standard Economic Evaluations Suitable for Evaluating Life-Extending Innovations in Kidney Care?

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## INTRODUCTION

The high cost of dialysis, coupled with the diminished patient quality of life, often results in the incremental cost-effectiveness ratio being above countries' willingness-to-pay (WTP) thresholds.

Despite this, the life-saving dialysis treatment remains the standard of care globally, indicating an acceptance of these costs by the society.

## OBJECTIVE

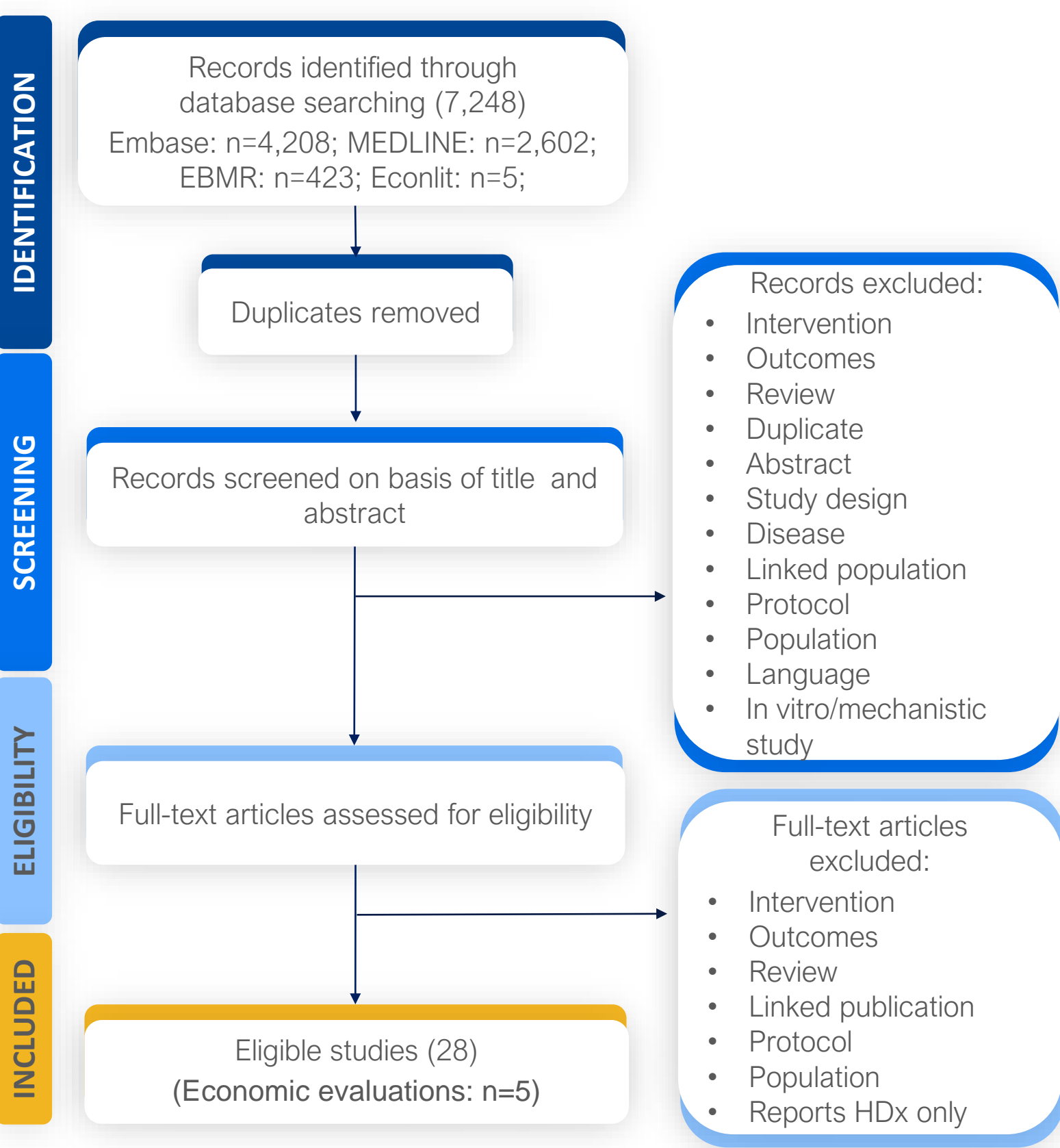
This study questions whether standard economic evaluations are suitable for assessing life-extending innovations in dialysis.

## METHOD

A systematic literature review was performed per the Preferred Reporting Item for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to identify clinical and economic benefits of Hemodiafiltration (HDF) versus Hemodialysis (HD) in in-center patients from 2013 onwards. Databases searched included Embase, MEDLINE, EBM reviews, and EconLit. Only the economic evaluations identified were analyzed.

## RESULTS

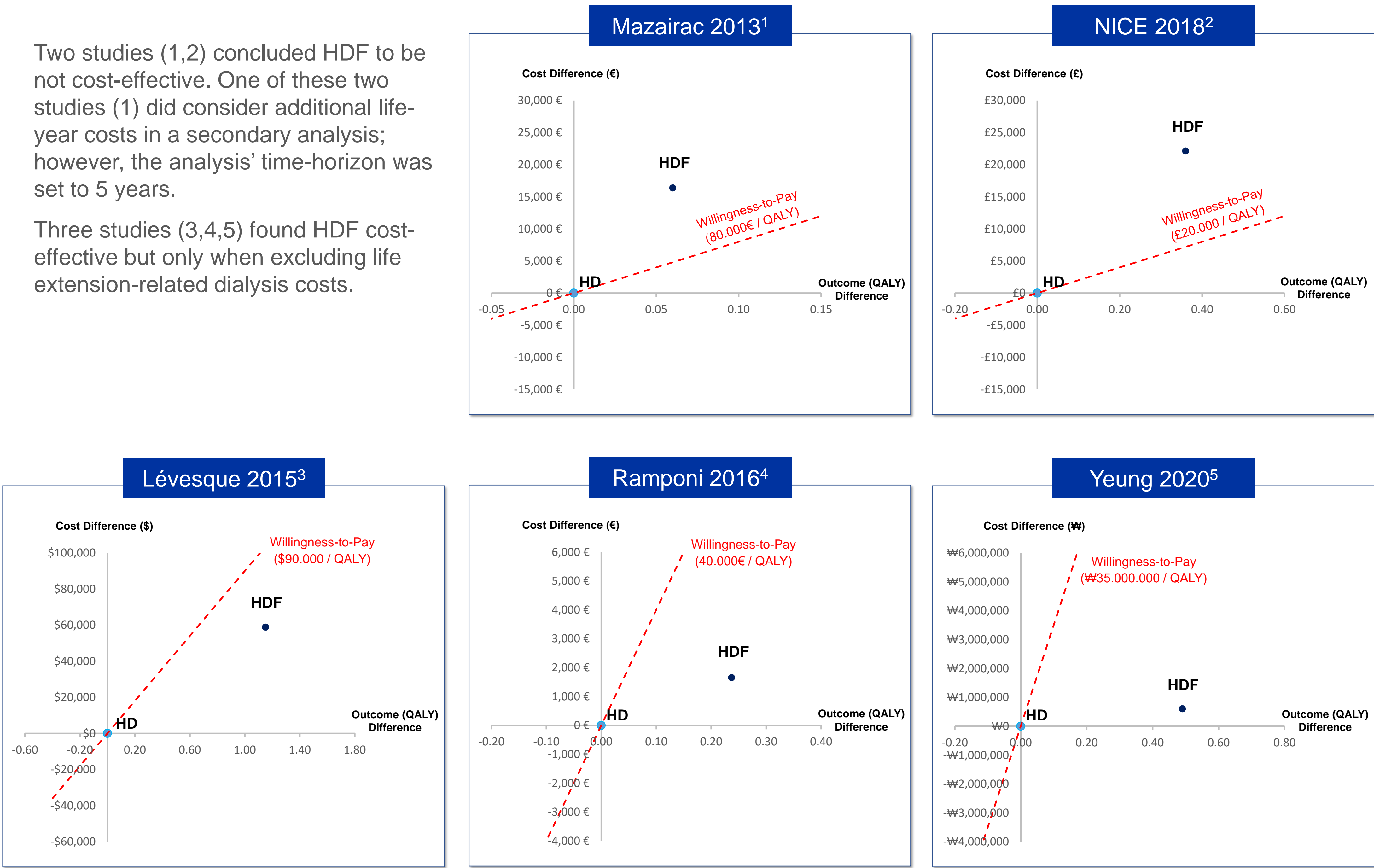
Figure 1: PRISMA FLOW DIAGRAM



Two studies (1,2) concluded HDF to be not cost-effective. One of these two studies (1) did consider additional life-year costs in a secondary analysis; however, the analysis' time-horizon was set to 5 years.

Three studies (3,4,5) found HDF cost-effective but only when excluding life extension-related dialysis costs.

Figure 2: COST-EFFECTIVENESS PLANES



The systematic literature review was able to identify 7,248 publications. Twenty-eight studies were found to be eligible and five economic evaluations were included in this study.

## CONCLUSIONS

Standard economic evaluations **may not be suitable** for assessing life-extending innovations in dialysis. Due to the **inherently high cost of dialysis**, **treatments with survival benefits** incur **significant general dialysis-related costs over the additional life years gained**. If these costs are **not excluded**, such interventions are **unlikely to show cost-effectiveness** with a lifetime horizon at country-specific WTP thresholds (e.g., UK at £20–30,000).

Since the **determination of cost-effectiveness** heavily **depends** on the **WTP threshold**, the **question arises** whether the **WTP should be increased**, or **costs excluded** from the analysis while keeping the WTP constant.

To **incentivize innovation**, expanded cost-effectiveness analysis or multi-criteria decision analysis might offer a more comprehensive assessment of high-cost treatments, however more research is needed.

## REFERENCES

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## CONTACT INFORMATION

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