

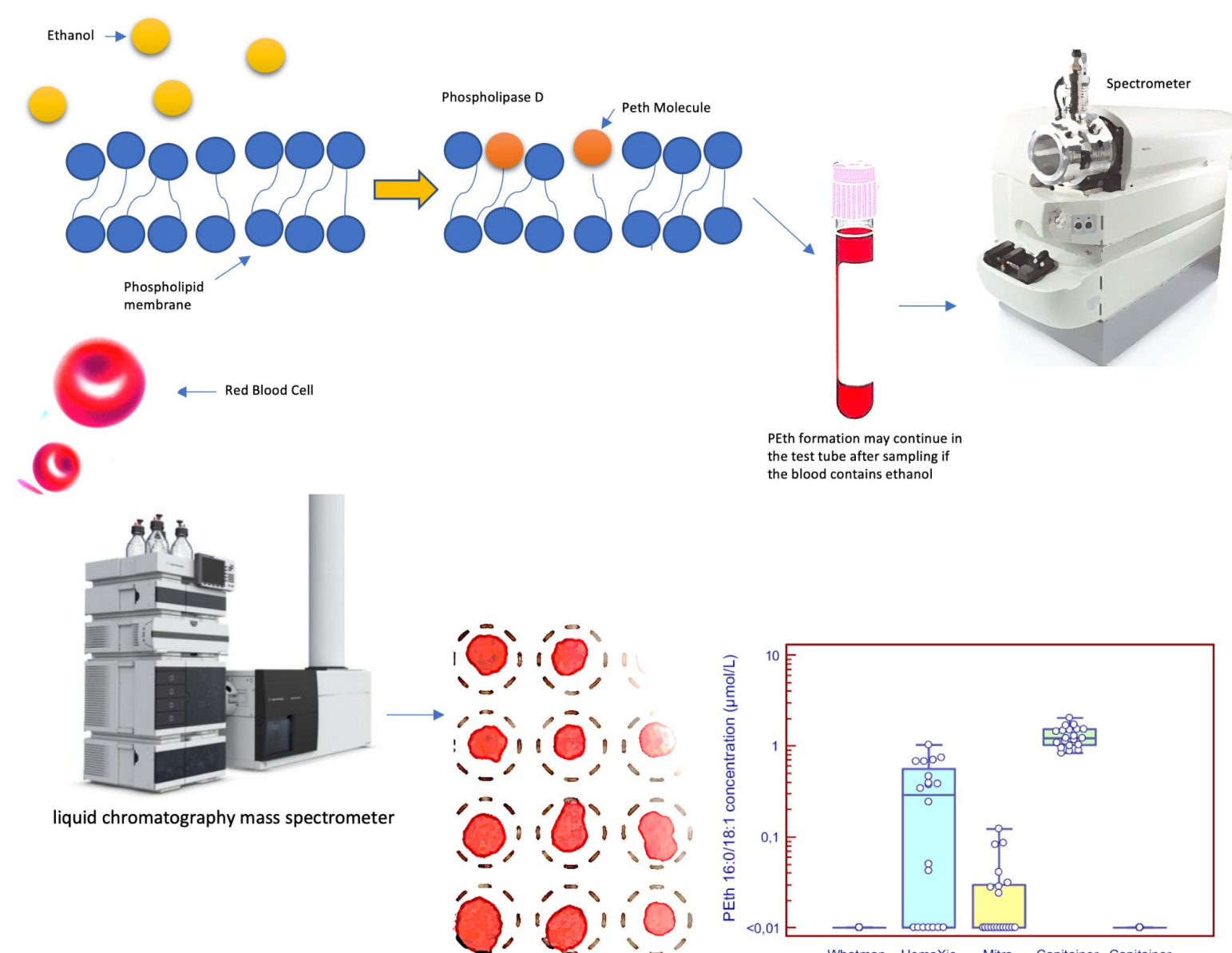
False Positive PEth Testing and Implications in Liver Transplantation Selection Process

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INTRODUCTION

Phosphatidylethanol (PEth) as a biomarker correlates to ethanol consumption¹

- Sensitivity
 - 81.8% - Low to moderate consumption²
 - 94.5-99% - High consumption³
- Specificity 100%
- Affected by hemoglobin, liver fibrosis, BMI⁴



We hypothesize PEth is impacted by **blood transfusion (pRBCs)**

- Blood donors are not screened for alcohol consumption⁵
- Transfusion → **FALSE POSITIVES**

CASES

Case 1:

- 63 year-old female with decompensated alcohol-related cirrhosis (MELD 27) admitted for acute hypoxic respiratory failure requiring intubation and acute blood loss anemia from bleeding antral gastric mass
- Abstinence x 6 months prior to transfer to UCLA
- Received 4 units of pRBCs
- Post-transfusion
 - POPEth 28 ng/ml (abstinent < 10)
 - PLPPEth 21 ng/ml (moderate alcohol consumption)

Case 2:

- 47 year-old male with decompensated alcohol-related cirrhosis (MELD 37) admitted multiple times for hypotension and severe anemia
- Initial presentation - endorsed abstinence x 1 month
 - Day 0 - PEth 0 ng/ml
- Received 6 units of pRBC over 51 days through intermittent hospitalization
 - Day 51 - PEth 11 ng/ml (light alcohol consumption)
- Strong medical team and family support corroborated continued abstinence

CONCLUSIONS

- False positive PEth testing → serious consequences for patients awaiting liver transplantation.
 - Erroneous inference of recent alcohol consumption
 - Potential for wrongful denial of life-saving treatment
 - Insurance
 - Institution
- Ethical considerations: justice & equity
- Relationship between PEth and blood transfusion **must** be clarified in further study.

AUTHORS & DISCLOSURES

All the authors are affiliated with the University of California Los Angeles Department of Family Medicine, Addiction Medicine. There are no financial disclosures. Authors 1 and 2 are current UCLA Addiction Medicine Fellows. Author 3 is the current UCLA Addiction Medicine Fellowship Program Director.

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Resources

- Overall Design Recommendations:
 - <https://biorender.com/blog/top-5-tips-for-designing-a-scientific-poster>
 - <https://guides.nyu.edu/posters>
 - <http://www.personal.psu.edu/drs18/postershow/>
- Specific Design Tools:
 - Icons: <https://thenounproject.com>
 - Free Stock Photos: <https://unsplash.com/>
 - Color Palette Picker (if you don't want to use ASAM's): <https://coolors.co/>
 - QR Code Generator: <https://www.qr-code-generator.com/>
- Printing (ASAM has not independently verified the quality of these printers)
 - <https://www.posterpresentations.com/>
 - <https://scientificposterprinting.com/>
 - <https://www.uptime.com/large-format-posters-printing.html>
 - <https://www.makesigns.com/products/scientific-posters>
 - <https://www.megaprint.com/research-posters.php>