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Out for blood: causal inference in clinical transfusion research

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Stellingen behorende bij het proefschrift
Out for blood: causal inference in clinical transfusion research

1. Blood transfusions from female donors with a history of pregnancy are associated with mortality in younger adult male transfusion recipients. (this thesis)
2. Storage time plays a role in the effect of ever-pregnant female donors on mortality, but limitations to observational data preclude causal claims. (this thesis)
3. Systematic reviews of initial, small case series reports, despite not giving high quality evidence on whether convalescent plasma is safe and effective against COVID-19, can help identify important knowledge gaps and guide future research. (this thesis)
4. Donor microchimeric cell-mediated immune modulation is the most convincing explanation for the observed association between donor pregnancy and transfusion recipient mortality. (this thesis)
5. 'Fresh' blood is more likely to be harmful than 'old' blood. (this thesis)
6. "Other things being equal, big data is better than small data" – Hernan, Robins. *Meaning: Observational data, when appropriately analyzed, has value and can be used to infer causality, and size does matter.*
7. "You are smarter than your data. Data do not understand causes and effects; humans do." - Judea Pearl. *Meaning: A human mind is still required for the translation of data into knowledge.*
8. 'Innovation points out paths that are possible; replication points out paths that are likely; progress relies on both.' Open Science Collaboration, Rahal, R. M., Kleinberg, B., & Crusius, J., 2015. *Meaning: We need to understand when we have reached a level of certainty we are satisfied with, and also when to pursue replication instead of novel research questions; they are both equally important.*
9. Thorough understanding of epidemiology in all fields of medicine is urgently needed, especially in the field of clinical transfusion research. (personal)
10. The temporal ordering of bidirectional effects is necessary to answer the question "which came first, the chicken or the egg?". (personal)
11. The empty phrase 'more research is needed' should be banned. (personal)
12. "We Are All Connected In The Great Circle Of Life" - Lion King. *Meaning: Human, animal and environmental health are linked and interconnected, and we must act to secure the health of the future generation.*