Poster 203: LYMPHOCYTE RECEPTOR SEQUENCING TO MONITOR ALLOIMMUNE RESPONSE: A SYSTEMATIC REVIEW

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- Early predictors of alloreactivity are not widely available
- Recent research demonstrates potential of lymphocyte receptor sequencing as indicator of immune response
- Systematic review examines current research and clinical feasibility of lymphocyte receptor sequencing for transplant monitoring

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Queries yielded 764 articles of which 82 met predefined inclusion criteria

Identification

Screening

Eligibility

Included

Records identified through MEDLINE and PubMed Central queries (*n* = 747)

Additional records identified through other sources (*n* = 17)

Records after duplicates removed (*n* = 706)

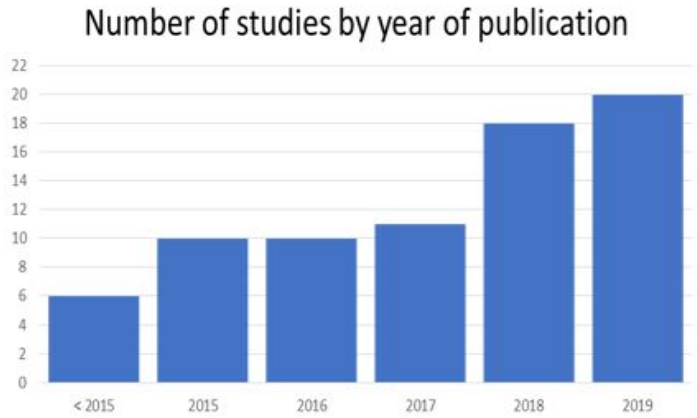
Records screened for title/abstract (*n* = 706)

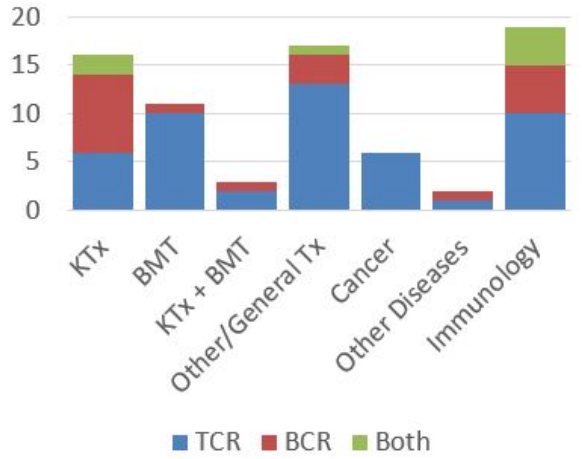
Records excluded due to irrelevant title/abstract (*n* = 616)

Full-text articles assessed for eligibility (*n* = 90)

Full text articles excluded (*n* = 8)
- Tx but not lymphocyte repertoire (*n* = 2)
- Tx but not donor reactivity/clonal expansion (*n* = 3)
- Lack of methodology details (*n* =1)
- Not tx nor lymphocyte repertoire(*n* = 2)

Studies included (*n* = 82)





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Conclusions

- CDR3 region of T-cell receptor beta chain is preferred sequencing target due to relevance in HLA-peptide recognition

- Transplant patients show lower repertoire diversity and specific expansion of T-cell and B-cell clones which persist after rejection; clonal deletion is shown in transplant tolerance

- Larger cohort studies are required to determine effectiveness of lymphocyte receptor sequencing as an approach for clinical management of transplant patients

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