

# **SPHPM Summer Vacation Program 2017**

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Bachelor of Public Health Science

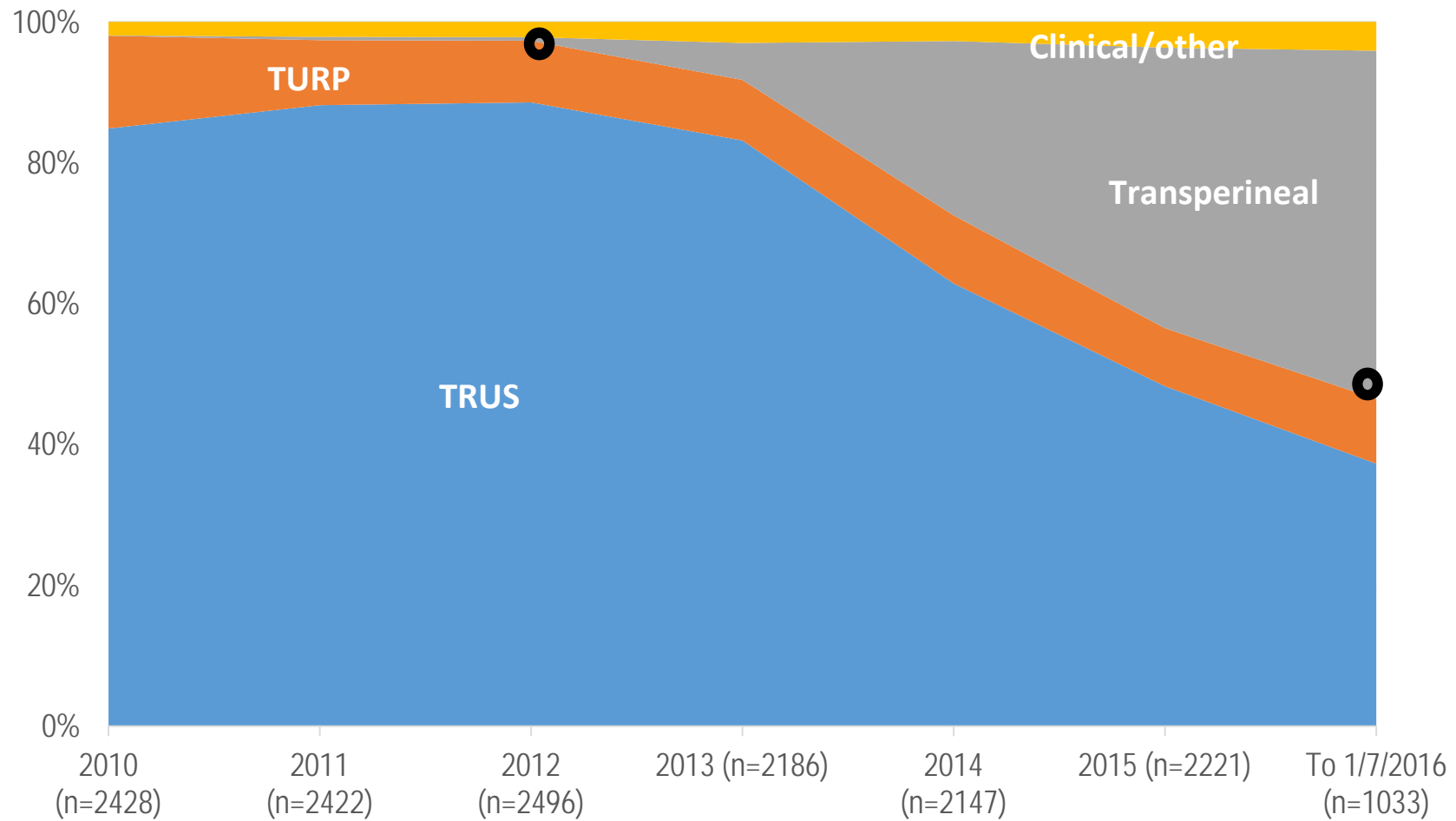
Supervisor: A/Professor Sue Evans, Clinical Registry Unit

# Project Overview

**Project title:** Comparison between transperineal biopsy (TP) and transrectal ultrasound (TRUS) guided biopsy in diagnosing prostate cancer

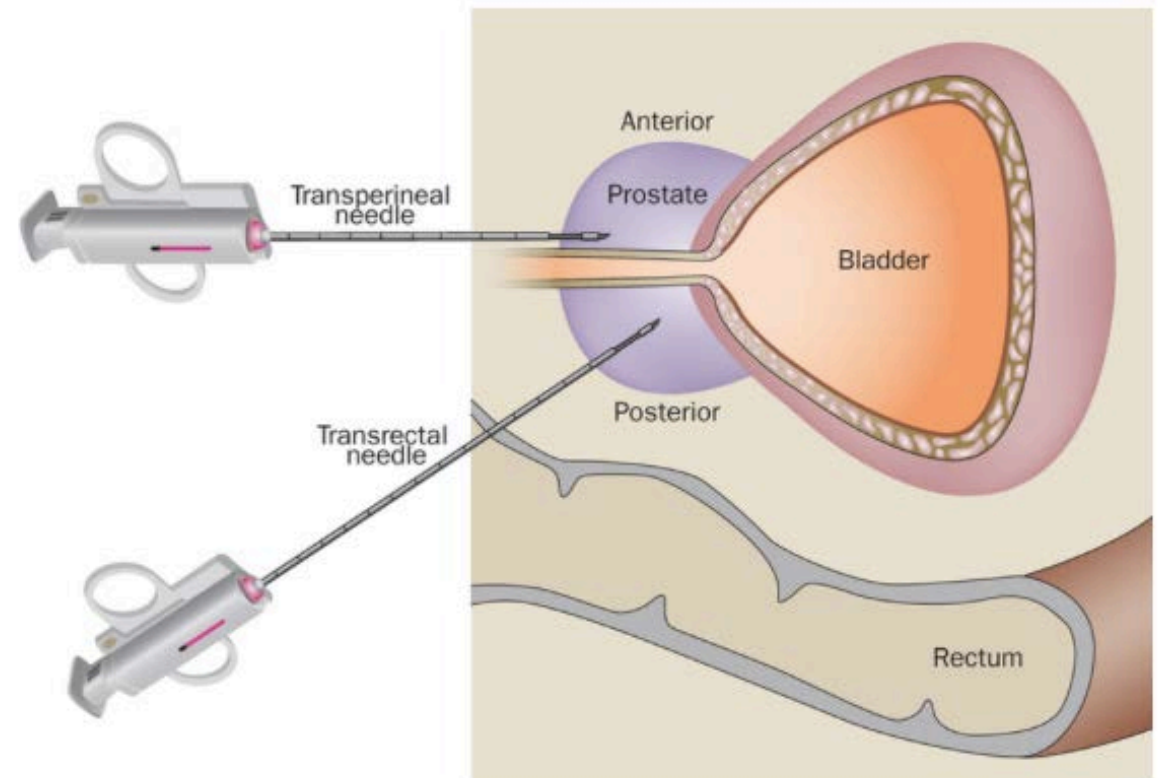
**Aim:** To compare the diagnostic accuracy of TRUS vs. TP biopsy approaches in identifying prostate cancer

# Trend in Method of Diagnosis



# Background Information

- Prostate cancer → **most commonly diagnosed** cancer and **third leading cause** of cancer-related mortality among men in Australia
- Early detection → improvement in cancer detection rate (CDR)
- **TP biopsy** & **TRUS biopsy** common diagnostic techniques



# Tasks

- ✓ Understand prostate cancer – i.e. diagnostic techniques used
- ✓ Weekly meetings with A/Professor Sue Evans & Dr. Gabriella Tikellis (PCOR-ANZ Program Coordinator)
- ✓ Develop study protocol for registration in PROSPERO
- ✓ Database search
- ✓ Learn to use Endnote
- ✓ Screen articles



## Welcome to PROSPERO

International prospective register of systematic reviews

### Register a review

Registering a review is quick and easy. Just follow these simple steps to register your review in PROSPERO

[Register your review now](#)

[Accessing and completing the registration form](#)

# Methodology & Outcome

## Criteria in selecting studies for review:

- RCTs or any comparative studies
- men with no previous diagnostic prostate biopsy
- Participants with urinary tract infection, acute prostatitis or previous history of prostate cancer

Intervention: TP biopsy

Comparison: TRUS biopsy

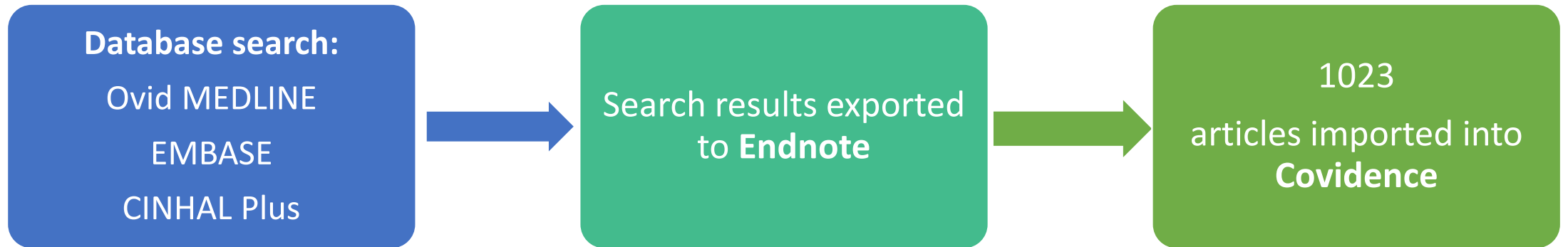
## Primary Outcome:

- Prostate CDR

## Secondary Outcome(s):

- Cancer survival
- Quality of life
- Procedural/post-operative pain
- Post-operative complications

# Search Strategy



## Key MeSH terms:

'transperineal'  
'transrectal'  
'prostatic neoplasms'

## In Covidence:

- 1023 titles & abstracts of studies screened
- 128 in conflict



# Project Results

- Found an exactly same systematic review (SR) that we intended to do
- **Results of SR:**
  - no significant difference between TP and transrectal (TR) biopsy regarding efficiency and complications
  - TR biopsy more preferred in terms of pain relief than TP
- **SR key terms:** ‘transperineal’, ‘transrectal’, ‘prostate biopsy’

www.impactjournals.com/oncotarget/

Oncotarget, 2017, Vol. 8, (No. 14), pp: 23322-23336

Research Paper

## Comparison between transrectal and transperineal prostate biopsy for detection of prostate cancer: a meta-analysis and trial sequential analysis

Jianxin Xue<sup>1,2,\*</sup>, Zhiqiang Qin<sup>2,\*</sup>, Hongzhou Cai<sup>3,\*</sup>, Chuanjie Zhang<sup>4</sup>, Xiao Li<sup>3</sup>, Weizhang Xu<sup>5</sup>, Jingyuan Wang<sup>6</sup>, Zicheng Xu<sup>3</sup>, Bin Yu<sup>3</sup>, Ting Xu<sup>3</sup>, Qin Zou<sup>3</sup>

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Keywords: transperineal, transrectal, prostate biopsy, prostate cancer, meta-analysis

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### ABSTRACT

To systematically assess the efficacy and complications of transrectal (TR) versus transperineal (TP) prostate biopsy in the detection of prostate cancer (PCa). A meta-analysis was performed by searching the databases Pubmed, Embase and Web of science for the relevant available studies until September 1st, 2016, and thirteen studies met the inclusion criteria. The pooled odds ratios with 95% confidence intervals were calculated to evaluate the differences of TR and TP groups in PCa detection rate. Then,

# Strengths & Limitations of the SR

## Strengths

- Published in high-impact journal *Oncotarget*
- Well-conducted
- Had high-impact factor of 5.168

## Limitations

- Published in journal that has never been heard of
- Study was not registered in PROSPERO
- Not widely cited
- Poorly written
- Did not follow requirement under PRISMA guidelines
- Oncotarget: obscure journal – under list of ‘predatory’ journals

# In Summary...

- Review published *Oncotarget* journal was listed as ‘predatory’ journal
- Journal is no longer ‘indexed’ in Medline since September 2017 → could not find in search
- This recent discovery has questioned need to re-evaluate the SR

## Lessons learned from project:

- Importance of doing a really thorough literature review
- Not everything goes according to plan



**Thank you!**