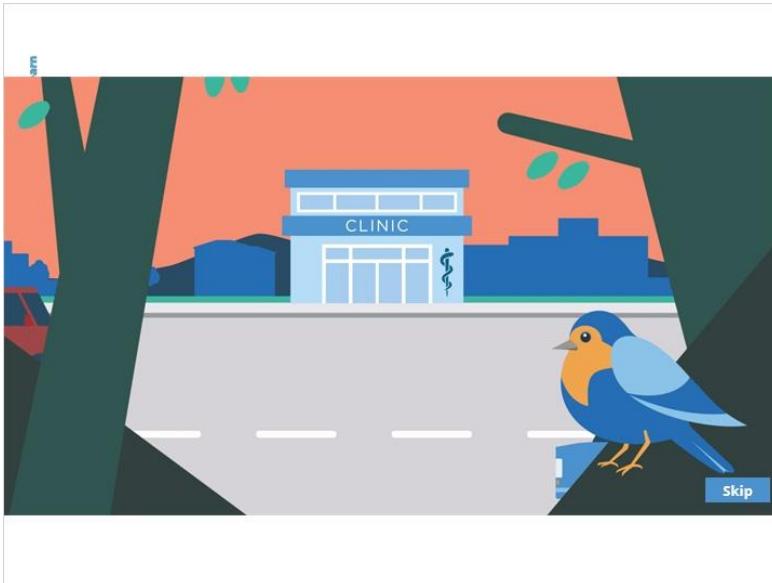


# Case 46 Per Colate

## 1. Conflicts

### 1.1 Intro Video



### 1.2 Module Navigation and Instructions

A screenshot of a course navigation interface. On the left, a vertical navigation menu includes 'Module Welcome', 'Module Navigation ...', 'Conflict of Interest ...', 'Learning Objectives', 'Note to Learners', 'Patient Case: Part 1', 'Priming Questions ...', and 'Comparison of COVID-...'. The 'Module Navigation ...' item is currently selected. To the right, a slide titled 'COVID-19 Diagnosis' features an illustration of a doctor and a patient. A 'Proceed' button is at the bottom right of the slide. The slide is part of a larger 'e-Learning: An online course for family physicians' module.

## 1.3 Learning Objectives

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### Learning Objectives

**At the end of this module participants should be able to:**

1. Identify key factors/findings in family medicine to help establish common clinical diagnoses.
2. Evaluate best evidence/guidance and practice tools to determine preferred treatment options for patients.
3. Synthesize patient preference, evidence and experience to formulate comprehensive plans for patient cases.

**Approximately 15 minutes to complete each patient case.**

**Proceed**

## 2. Mr Per Colate

### 2.1 Meet Per Colate

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#### Mr. Per Colate, 72

- You had seen Per three months ago for bothersome nocturia and urinary frequency.
- His symptoms have improved but he still finds that the symptoms are negatively impacting his self confidence and quality of life.
- He tried to lose weight, but unfortunately, his weight has been stable (BMI 35).
- You had asked him to do some bloodwork and to follow-up with you.
- His PSA is 1.9 and urinalysis is normal.

**Previous visit** **Conversation** **What do you think?**



## Conversation (Slide Layer)

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### Mr. Per Colate, 72

 Let's make sure your prostate isn't too big.

 Ok, I hope you have something to offer, it's just terrible. I can't go outside anymore. It really brings me down.

                <img alt="Icon of a person with a question mark

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Which of the following statements about the diagnosis of benign prostatic hyperplasia (BPH) is most accurate?



- Digital rectal examination (DRE) can help identify very large prostates.
- Post void residual is not helpful to diagnose BPH.
- PSA can be used as a surrogate for prostate volume.
- All of the above

Submit

## 2.3 Review

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### Review



Answer: All the above.

- Digital rectal exam (DRE)
- Prostate specific antigen (PSA)

Click on the buttons to view additional information

Moving Forward

## DRE (Slide Layer)

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### Review



**Answer:** All the above.

**Digital rectal exam (DRE)**

**Prostate specific antigen (PSA)**

**DRE for prostate volume measurement:**

Systematic review (19 studies): There is good correlation if performed by urologist or physicians with focused urological practices (correlation coefficients 0.6-0.9). There is a weak-moderate correlation if performed by physicians with more general practices.

The largest cohort study of 1688 patients involved DRE performed by urologist. It was best at "ruling in" very large prostates (>50cc) with a specificity of 99.8% (but a sensitivity of 9%).

**Moving Forward**

## PSA (Slide Layer)

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### Review



**Answer:** All the above.

**Digital rectal exam (DRE)**

**Prostate specific antigen (PSA)**

**PSA for prostate volume approximation:**

In a population-based cross-sectional study of 1,524 men for whom a diagnosis of prostate cancer had been excluded:

- The area under the curve (AUC) for serum PSA was 0.8-0.9 for prostate volume 30-50mL.
- For DRE, it was 0.7-0.8. This indicates that PSA is a more reliable predictor of prostate volume than DRE in most cases.
- AUC values: 0.7-0.8 acceptable and >0.80 good predictive values.

**Moving Forward**

## 2.4 True or False

(Multiple Choice, 10 points, 1 attempt permitted)

True or False? Approximately 1% of men with BPH (on no treatment, PSA ~ 2.5) will experience urinary obstruction at 10 years (needing a catheter).



True  
 False



**Submit**

## 2.5 Review

### Review



**Answer:** False.

A randomized trial of ~60 year old men with BPH and PSA ~2.5 reported outcomes for those taking placebo.

- Clinical progression (>4 point increase on prostate symptom scale, which would be clinically noticeable):
  - ~35% at 10 years
- Acute urinary obstruction (needing a catheter):
  - ~6% at 10 years
- Invasive therapy due to BPH: ~13% at 10 years

• These numbers are higher for men with larger prostates (PSA~4 or prostate volume ~40 mL).

**Moving Forward**

## RCT (Slide Layer)

CFPCLearn

### Review



**Answer:** False.

A randomized trial of outcomes for those that

- Clinical progress: which would be
  - ~35% at 10 y
- Acute urinary of
  - ~6% at 10 ye
- Invasive therapy

• These numbers are prostate volume ~4

RCT, ~60 year old men with BPH, PSA ~2.5 on placebo

Clinical progression (>4 point increase on prostate symptom scale, which would be clinically noticeable): ~35% at 10 years

Acute urinary obstruction (needing a catheter): ~6% at 10 years

Invasive therapy due to BPH: ~13% at 10 years

These numbers are higher for men with larger prostates (PSA~4 / prostate volume ~40 mL).

**Moving Forward**

## 2.6 Question

(Multiple Choice, 10 points, 1 attempt permitted)

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### Which of the following statements is the least accurate?



5-alpha reductase inhibitors decrease the chance of BPH surgery.

Alpha-1 antagonists decrease the chance of BPH surgery.

5-alpha reductase inhibitors are unlikely to benefit patients without BPH.

Erectile dysfunction is common with 5-alpha reductase inhibitors.

**Submit**

## 2.7 Review

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### Review



**Answer:** Alpha1-antagonists decrease the chance of BPH surgery.

1

2

3

4

5

6

7

8

9

10

**Alpha-1 antagonists**

5 alpha reductase inhibitors

Treatment threshold

Combination treatment

Click on the buttons to view additional information

Moving Forward

### alpha-1 antagonists (Slide Layer)

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### Review



**Answer:** Alpha1-antagonists decrease the chance of BPH surgery.

1

2

3

4

5

6

7

8

9

10

**Alpha-1 antagonists**

5 alpha reductase inhibitors

Treatment threshold

Combination treatment

For men with BPH, **alpha-1 antagonists** improve symptoms but do not decrease the chance of BPH surgery or acute urinary retention.

x

Moving Forward

## 5 alpha (Slide Layer)

CFPC Learn

### Review



**Answer:** Alpha1-antagonists decrease the chance of BPH surgery.

**Alpha-1 antagonists**

**5 alpha reductase inhibitors**

**Treatment threshold**

**Combination treatment**

**5-alpha reductase inhibitors (Finasteride, Dutasteride):**

- BPH surgery: 1% (at 4 years) versus 5% on placebo. These drugs can alter the natural history of BPH.
- Symptom reduction similar to alpha-blockers
- Subgroup analysis: benefit only if prostate volume >30cc (not known in primary care!) and/or **PSA >1.5**. It is likely that the bigger the prostate, the higher the benefits.
- Side effects: erectile dysfunction ~18% (at 4 years) versus ~13% placebo.

**Moving Forward**

## PSA (Slide Layer)

CFPC Learn

### Review



**Answer:** Alpha1-antagonists decrease the chance of BPH surgery.

**Alpha-1 antagonists**

**5 alpha reductase inhibitors**

**Treatment threshold**

**Combination treatment**

There is no consensus on what PSA is "high enough to start" a 5-alpha reductase inhibitor. Up-to-Date™ suggests PSA>1.5ng/dL as a threshold (correlates with prostate volume of ~35 mL).

After starting 5-alpha reductase inhibitors, PSA will decrease by ~50% (at 6-12 months). If PSA does not decrease or if PSA starts to increase after reaching nadir, patients should be assessed for prostate cancer.

**Moving Forward**

## Adding 5 (Slide Layer)

CFPC Learn

### Review



**Answer:** Alpha1-antagonists decrease the chance of BPH surgery.

**Alpha-1 antagonists**

**5 alpha reductase inhibitors**

**Treatment threshold**

**Combination treatment**

Adding a 5-alpha reductase inhibitor to alpha-blocker:

- Less clinical deterioration: 5-13% with combination therapy versus 10-22% alpha blockers alone.
- Decreased need for surgery: 1-2% combination therapy versus 3-8% alpha blockers
- BUT, the patient gets side-effects from both medications!

Moving Forward

## 2.8 Conversation

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### Mr. Per Colate, 72



Your PSA is 1.9. We could start a medication to try to shrink your prostate but it may lead to some sexual side effects.

Why can't I just get some surgery to make my prostate smaller or something?

What do you think?

## 2.9 Choose all that apply.

(Multiple Response, 10 points, 1 attempt permitted)

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Which of the following statements are the most accurate?



Choose all that apply.

A. Transurethral resection of the prostate (TURP) is more effective than medications.

B. TURP is an easy ambulatory procedure for patients to undergo.

C. Many minimally invasive treatments are available for BPH, but it is not clear how they compare to medications or TURP.

Submit

## 2.10 Review

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Review



Answer: The correct answers are A and B.

Medications

Surgical options

Click on the buttons to view additional information

Moving Forward

## Medications (Slide Layer)

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### Review



**Answer:** The correct answers are A and B.

**Medications**

**Surgical options**

- **Medications** provide an average reduction in prostate symptoms score of 3-6 (4 is considered clinically noticeable). For **TURP**, it is 10-18 points.
- It involves the **endoscopic removal** of the inner zones of the prostate with a heated probe.
- It requires **anesthesia** and carries a 5% risk of severe hemorrhage. Some patients will have ejaculatory dysfunction (percentage unclear).

**Moving Forward**

## Newer surgical treatments (Slide Layer)

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### Review



**Answer:** The correct answers are A and B.

**Medications**

**Surgical options**

**Newer surgical treatments**

- Some are similar to TURP but use different energy sources to remove tissue and cause less bleeding (eg: laser resection)
- Others are "minimally invasive" : they do not remove tissue but cause *in situ* coagulative necrosis using a heating source.
  - Can be carried out in ambulatory care (analgesia / sedation with minimal anesthesia)
  - Can result in prolonged bladder catheterization. Five-year re-treatment rates 42-59% for some procedures (transurethral microwave therapy).

## 2.11 Let's Make a Plan

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### Let's Make a Plan



Write down some points related to a plan for Mr Per. It can include the following: lifestyle or prescription intervention(s), lab(s)/test(s) required, follow up appointment, and referrals required.

Fill in your plan for the patient here



See how your plan compares

## 2.12 Plan Answers

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### Mr. Per Colate, 72



These are some potential points for the patient. How does your plan compare?

Medication

Follow Up

Click on the buttons to see suggested answers

What's in a name?

## Medication (Slide Layer)



Mr. Per Colate, 72



These are some potential points for the patient.  
How does your plan compare?

Medication

Follow Up

What's in a name?

- Continue tamsulosin 0.4mg PO qhs.
- Start finasteride 5mg PO daily.
- You give him a requisition to repeat the PSA in 6 months. You expect the PSA to decrease by 50%.

## Follow Up (Slide Layer)



Mr. Per Colate, 72



These are some potential points for the patient.  
How does your plan compare?

Medication

Follow Up

What's in a name?

If his symptoms do not improve or if his PSA does not decrease as anticipated, you will refer him to a urologist.

## NAME (Slide Layer)

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### Mr. Per Colate, 72

These are some potential points for the patient.  
How does your plan compare?

**Medication**

**Follow Up**

**What's in a name?**

What is the meaning of the name Per Colate?

Mr. Per Colate's name is inspired by a coffee percolator, that creates drips of coffee.

## 2.13 References

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### References

Thanks for visiting the clinic!

**References:** Available [here](#).

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