

## Appendix A. Physician Recommendation Coding System (PhyReCS) Codebook

### **Purpose**

The Physician Recommendation Coding System (PhyReCS) provides researchers with a reliable and valid way to capture the strength with which physicians recommend for or against treatment recommendations during clinical appointments, developed in the context of early stage prostate cancer. By quantifying physicians' recommendations, the PhyReCS will enable researchers to answer important questions involving physicians' recommendations, which are a key component of many clinical encounters and medical decision making processes.

### **Coding overview**

For men with early stage prostate cancer, there are three main treatment options: active surveillance, surgery, and radiation (external beam and brachytherapy). Each treatment option receives an independent global treatment recommendation score, which ranges from -2 (strong recommendation against the treatment) to +2 (strong recommendation for the treatment). Recommendation scores are global scores in that coders consider the entirety of the conversation, including the order and context of all statements, when determining recommendation scores.

### **Descriptions of treatments**

1. Active Surveillance (AS): involves forgoing immediate active treatment and getting regular follow-up tests (prostate specific antigen blood tests, digital rectal exams, and biopsies]. Patients can choose to receive active treatment at any time if there are clinical signs that the cancer is progressing or they simply decide they want to get active treatment.

- a. Note: There is also a more passive form of treatment called “watchful waiting (WW).” Although WW is technically different from AS (WW typically does not include regular biopsies), patients and physicians often use these terms interchangeably. In the (rare) case that the physician differentiates between AS and WW, assign a recommendation score to both treatments separately and note this fact on the coding worksheet. The final “active surveillance recommendation score” will be equivalent to whichever score is higher (AS or WW).
2. Surgery (Sx): involves removing the prostate (“prostatectomy”). Can be done using two different approaches: open or robotic (sometimes referred to as “laparoscopic”).
  - a. Note: If the physician differentially recommends open versus robotic surgery (e.g., “you should not get robotic surgery because your weight is too high but open surgery is a good option for you”), assign a recommendation score to both approaches separately and note this fact on the coding worksheet. The final “surgery recommendation score” will be equivalent to whichever score is higher (open or robotic).
3. Radiation (Xrt): involves radiating the prostate. Can be done using two different approaches: external beam or brachytherapy (sometimes referred to as “seeds”). Each approach will receive its own score since physicians often differentiate between the appropriateness of these treatments.
  - a. External beam radiation: radiation is directed at the prostate from outside patient’s body, The physician may describe initially placing “markers” in the prostate so that they can accurately direct the external beam radiation; this is still considered external beam radiation.

- b. Brachytherapy: radiation comes from “seeds” that are implanted into patients’ prostate.
- c. Note: If physicians are discussing “radiation” in general, this is typically in reference to external beam radiation therapy (although use context clues to interpret).  
Brachytherapy recommendation scores reflect explicit comments about brachytherapy.
- d. Note: Brachytherapy may be mentioned in passing, particularly if the option is unavailable at that particular treatment site. In these cases, there may not be enough information to assign a recommendation score and the code “not discussed” may be the most appropriate code in terms of whether the physician recommended the treatment option.

### **Coding instructions**

The coder will assign a global recommendation score for each treatment between -2 and +2, with the coder assuming a beginning score of 0 (neutral). Global scores are intended to capture coders’ overall impression of physicians’ recommendations for the main treatment options: active surveillance, surgery, and radiation (both external beam and brachytherapy). The recommendation scores are “at the end of the day” reflections.

Notes:

- The function of a statement can be more important than the specific words the physician uses. For example, a physician does not have to use the word “recommend” for the statement to function as a recommendation.

- Each treatment recommendation code is independent of the others. For example, giving an explicit recommendation for surgery does not automatically correspond to a recommendation against active surveillance and/or radiation.
- Recommendations for/against treatments are inherently connected to the actual treatment *choice* for a specific patient, not simply a description of the treatment. Physicians can make statements about treatment side effects being undesirable (e.g., there are risks of surgery such as infection), but these statements must be linked to the choice of that treatment option for the patient in order for these statements to affect the recommendation score (e.g., there are risks of surgery, such as infection, and because of your health condition I don't think it would be a good choice for you.).
- If the physician does not mention a particular treatment, code it as “not discussed (ND).”

<b>Global Treatment Recommendation (Rec) Score</b>					
<b>ND</b>	<b>-2</b>	<b>-1</b>	<b>0</b>	<b>1</b>	<b>2</b>
<b>Not discussed</b>	<b>Strong rec against</b>	<b>Mild rec against</b>	<b>Neutral</b>	<b>Mild rec for</b>	<b>Strong rec for</b>
Physician does not mention the treatment option or provides so little information that recommendation score cannot be assigned.	Physician gives a clear, strong rec against treatment option.	Physician gives mild, relatively subtle rec against treatment option.	Physician portrays treatment as an option; gives no indication of whether this treatment is particularly good or bad for patient.	Physician gives mild, relatively subtle rec for treatment option.	Physician gives a clear, strong rec for treatment option.

## **Detailed description of each code**

### **A. Not discussed**

*Physician does not mention treatment option or mentions it so briefly that no recommendation score can be assigned.*

- Often occurs when brachytherapy is unavailable. For example, “What the VA does is they do external beam radiation, meaning instead of putting like little radioactive seeds in your prostate, they shoot radiation at it.” In this excerpt, there is not enough information to code this as a recommendation for or against brachytherapy. If this was the only type of statement about brachytherapy in the appointment, brachytherapy would be coded as “not discussed.”
- May also occur if physician decides a treatment option (e.g., AS) is not appropriate for patient but does not vocalize that decision. Instead, s/he only mentions the other treatment options (e.g., surgery and radiation) during the appointment.

### **B. Strong recommendation against (“This is not a good option.”)**

*Physician gives a clear recommendation against treatment option.*

- Physician explicitly states that a patient should not choose treatment option (or options).
- Physician makes clear value statements about a particular treatment option indicating that it would be bad for the patient.
- May occur because medical factors make treatment contraindicated (e.g., surgery for obese patient with previous bowel surgery).

- “I do not recommend” phrasing not required; can be some other clear statement negating this option

### **C. Mild recommendation against (“This is a probably not a good option.”)**

*Physician identifies treatment as a valid option, but is leaning away from this option. Can suggest negatives about this option, but does not go as far as giving an explicit recommendation against option.*

- Physician makes some negative value statements about the treatment option but does not go as far as giving an explicit recommendation against option.
- May include physician “softening” a recommendation against the treatment with phrases such as “but it’s your choice” or “but there are other options that you could choose and you have to make the final decision” or “but I’m biased”

### **D. Neutral – (“This is a fine option.”)**

*Physician identifies treatment as a valid option. The physician may refer to it as “fine” or makes no value statements about the option beyond it being one the patient could choose.*

- Physician is neutral about treatments’ appropriateness for the patient.
- Physician says treatment option is reasonable, but never qualifies it as a good or bad option.
- Physician makes no value statements about treatment option beyond identifying it as an option.

### **E. Mild recommendation for (“This is a good option.”)**

*Physician identifies treatment as a valid option, and is leaning towards this option. Can suggest positives about this option, but does not go as far as giving an explicit recommendation.*

- Physician makes some positive value statements about the treatment option but does not go as far as giving an explicit recommendation.

- Physician makes some positive value statements about a treatment option, but never rises to the level of a recommendation.

#### **F. Strong recommendation for (“This is a very good option.”)**

*Physician gives a clear recommendation for treatment option.*

- Physician explicitly states that a patient should choose treatment option
- Physician makes clear value statements about treatment option indicating that it would be good or “the best” for the patient
- A strong recommendation **CAN** include statements such as “but it’s your choice” or “but you’re the boss.” A strong recommendation does **NOT** mean that the physician tells the patient that treatment is the only option.
- “I recommend” phrasing not required; can be some other clear statement promoting this option

#### **Coding process**

1. For each clinical appointment, you will fill out a “coding worksheet.”
2. Complete the entire coding process in one sitting – do not take a break and then return to the same appointment later.
3. All treatments begin with a score of 0. As you read the transcript, the physician may make recommendations for/against particular treatments. As you read these types of statements, adjust the recommendation score up/down as appropriate.
4. If, by the end of the transcript, there has been no mention of a particular treatment, change the score to “not discussed (ND).”
5. At the end of the transcript, circle the final recommendation scores (one for each treatment option) that have evolved over the course of the appointment.

6. “Step back” and make sure that your final recommendation scores reflects the physicians’ overall portrayal of the treatment as a choice for that patient.
7. You may write notes about a particular treatment option or the coding in general.



## Coding Worksheet

**Treatment Option Recommendation Coding** Subject ID: \_\_\_\_\_ Coder: \_\_\_\_\_

<b>Treatment</b>	<b>Recommendation Score</b>						<b>Notes</b>
Active Surveillance	-2	-1	0	+1	+2	ND	
Surgery	-2	-1	0	+1	+2	ND	
Radiation	-2	-1	0	+1	+2	ND	
Brachytherapy	-2	-1	0	+1	+2	ND	

ND = not discussed