

## The Journey from Individual Experience to Far-Reaching Research Question

### Part One

Describe your areas of focus, in your own words.

General Issues	
1. What diagnostic issues are you most interested in? <i>How are these issues important to the affected patient community?</i>	<i>We need to do a better job finding recurrence of cancer, whether it's encouraging more routine colonoscopies in colon cancer, more regular PSA testing in prostate cancer, or follow-up imaging in breast cancer. I know many patients who want more assurance about recurrence, but I'd want to talk to specific communities about their values/preferences.</i>
2. What do you think could be done differently to improve these issues?	<i>Better testing, better patient communication and education.</i>
3. How would these improvements be clinically significant? <i>To what extent would these improvements be meaningful to patients?</i>	<i>Catching cancers earlier gives us a better shot at treatment—patients could feel more reassured and have better rates of survival.</i>

### Part Two

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You may have identified several diagnostic areas in need of improvement, but in this step we'll prioritize to arrive at a single issue. Which of your diagnostic issues is most likely to lead to substantial improvement in the quality and outcome of healthcare delivery in the next five years? When you've identified that single issue, you can begin filling out the table on the right, based on some of the ideas and concept you generated above.

General Issues		Single Issue		
1. What diagnostic issues are you most interested in? <i>How are these issues important to the affected patient community?</i>	<i>We need to do a better job finding recurrence of cancer, whether it's encouraging more routine colonoscopies in colon cancer, more regular PSA testing in prostate cancer, or follow-up imaging in breast cancer. I know many patients who want more assurance about recurrence, but I'd want to talk to specific communities about their values/preferences.</i>		1. What diagnostic issue are you working to solve and <i>what is the importance to the patient community?</i>	<i>Better detection of breast cancer recurrence. The women I've worked with who are survivors worry a great deal about recurrence, but I would want to partner with the patient community to get more insights from them.</i>
2. What do you think could be done differently to improve these issues?	<i>Better testing, better patient communication and education.</i>		2. What intervention could be tested to try to combat this problem?	<i>Figuring out the most precise imaging instruments to use—like MRI in addition to mammograms</i>
3. How would these improvements be clinically significant? <i>To what extent would these improvements be meaningful to patients?</i>	<i>Catching cancers earlier gives us a better shot at treatment—patients could feel more reassured and have better rates of survival.</i>		3. What outcomes <i>that are meaningful to patients</i> could be measured to determine improvement?	<i>Earlier detection of recurrence, and greater rates of survival.</i>

### Part Three

Finally, we will transition from your single issue description to the scientific "PICOTS" format.

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Technical Description			PICOTS Format	
1. What diagnostic issue are you working to solve <b>and what is the importance to the patient community?</b>	<i>Better detection of breast cancer recurrence. The women I've worked with who are survivors worry a great deal about recurrence, but I would want to partner with the patient community to get more insights from them.</i>		P: What is the patient population?	<i>Women who have survived one occurrence of breast cancer.</i>
2. What intervention could be tested to try to combat this problem?	<i>Figuring out the most precise imaging instruments to use —like MRI in addition to mammograms.</i>		I: What is the intervention?  C: To what will you compare the intervention?	<i>Breast MRI in addition to mammograms  Mammograms without MRIs</i>
3. What outcomes <b>that are meaningful to patients</b> could be measured to determine improvement?	<i>Earlier detection of recurrence, and greater rates of survival.</i>		O: What are the outcomes you are seeking?  T: In what timeframe?  S: In what setting?	<i>Earlier detection of recurrence  Within two years  Within a health system</i>

**Part Four**

Now that you have your PICOTS statement, we can drill down into the specifics of your proposed study.

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### **P (Patient Population):**

- Do you already have connections to this community? If yes, are they willing to be involved in a study? If not, how will you connect with the community? Are there patient advocacy, faith-based, or community organizations you may want to partner with?  
*I have worked with several breast cancer survivors and would ask them for introductions/partnership to their patient organizations.*
- Where does the population live? Are they in a single geographic area or in multiple places around the country?  
*I want to do the study within a single health system in California so I will need to work with local patients who are seen within this health system.*

### **I (Intervention):**

- Who will implement the intervention? Do you have a connection to that community of practitioners? If not, how will you form a connection with the community?  
*Radiologists and oncologists—no connection but I will reach out and establish a connection.*
- In what institution or system does the intervention need to be implemented? Do you have a connection to an institution or health system in which the intervention can be implemented?  
*My practice is part of the local health system and that's where we will conduct the study.*

### **C (Comparison):**

- Is this comparison already widely used?  
*In different parts of the country.*
- Are the intervention and comparison viable and acceptable to the patient community?  
*I believe so, but this will be important to discuss with my patient partners.*

### **O (Outcomes):**

- How will you measure these outcomes? Does the method or tool you want to use already exist?  
*Yes, we can rely on claims data, medical records, and other data sources.*
- Is this outcome important and meaningful to the patient community?  
*This will be critical to learn from the patient community.*

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### **T(Timing):**

- How long will the intervention need to be implemented before you expect to start seeing results?  
*We will follow data/trends over two years.*
- Is this amount of time reasonable/feasible to the patient community?  
*This will be critical to learn from the patient community.*

### **S (Setting):**

- In what setting (clinic, hospital, academic institution, etc.) will the study take place?  
*My local health system.*
  - Is this setting accessible and welcoming to the patient community?  
*This will be critical to learn from the patient community.*
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