

Supplemental Table 1: Post-PET Management Pathway Category Details (n=382)

Intended management before PSMA PET	Intended management after PSMA PET	Change category	N (%)	
Local	Local	No Change	23 (6%)	
	Systemic	Major Change	16 (4%)	
	Active Surveillance	Major Change	14 (4%)	
	Modify Therapy	Minor Change	3 (1%)	
	Local + Systemic	Major Change ¹	23 (6%)	
	„other“	Minor Change	5 (1%)	
	Systemic	Local	Major Change	43 (11%)
		Systemic	No Change ²	83 (22%)
		Active Surveillance	Major Change	11 (3%)
		Modify Therapy	Minor Change	1 (0%)
		Local + Systemic	Major Change	19 (5%)
		Other	Minor Change	19 (5%)
	Active Surveillance	Local	Major Change	19 (5%)
		Systemic	Major Change	8 (2%)
		Active Surveillance	No Change	17 (5%)
		Modify Therapy	Minor Change	0 (0%)
		Local + Systemic	Major Change	10 (3%)
		Other	Minor Change	1 (0%)
	Other	Local	Minor Change	7 (2%)
		Systemic	Minor Change	5 (1%)
		Active Surveillance	Minor Change	3 (1%)
		Modify Therapy	Minor Change	0 (0%)
		Local + Systemic	Minor Change	3 (1%)
		Other	No Change	2 (1%)
	Local + Systemic	Local	Major Change ³	13 (3%)
		Systemic	Major Change	4 (1%)
		Active Surveillance	Major Change	5 (1%)
Modify Therapy		Minor Change	0 (0%)	
Local + Systemic		No Change	23 (6%)	
Other		Minor Change	2 (1%)	

¹Exception: Addition of ADT considered Minor Change (n=22); ²Exception: Switch to different type of systemic therapy considered Major Change (n=26); ³Exception: Removal of ADT considered Minor Change (n=13)

Supplemental Figure 1: Q1 survey

Q1: SURVEY BEFORE PSMA PET/CT

Ga-68 PSMA-11 SCAN BCR

PATIENT INFORMATION

Last name: _____ First Name: _____

Date of Birth: _____ Medical Record Number: _____

1. Indicate pre ⁶⁸Ga-PSMA PET working clinical summary for recurrence location:

Recurrence is localized in (select all that apply)

- unknown recurrence location
- the prostate bed
- pelvis outside of prostate bed and/or intrapelvic lymph nodes
- extrapelvic soft tissue, lymph nodes and/or organ metastases (non-bone)
- bone

2. If ⁶⁸Ga-PSMA PET was not available, which additional imaging test would you order?

- | | |
|---|---|
| <input type="checkbox"/> MRI | <input type="checkbox"/> ProstaScint |
| <input type="checkbox"/> CT | <input type="checkbox"/> Biopsy, image guided |
| <input type="checkbox"/> FDG/Choline/Acetate/Fluciclovine PET | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Bone scan/Fluoride PET | |

3. What would be your next step in management, if you were not to order this study?

- | | |
|---|--|
| <input type="checkbox"/> Surgery | <input type="checkbox"/> Radionuclide therapy (Ra-223) |
| <input type="checkbox"/> External-beam radiation therapy | <input type="checkbox"/> Bone targeted therapy |
| <input type="checkbox"/> ADT for hormone dependent cancer | <input type="checkbox"/> Modify dose of existing therapy |
| <input type="checkbox"/> Abiraterone/Enzalutamide | <input type="checkbox"/> Active surveillance |
| <input type="checkbox"/> Chemotherapy | <input type="checkbox"/> Other (please describe below) |

Other: _____

Referring Physician Name: _____

Date: _____ Signature: _____

Supplemental Figure 2: Q2 survey

Q2: SURVEY WITHIN 4 WEEKS AFTER PSMA PET/CT

Ga-68 PSMA-11 SCAN BCR

PATIENT INFORMATION

Last name: _____ First Name: _____

Date of Birth: _____ Medical Record Number: _____

1. Indicate post ⁶⁸Ga-PSMA PET working clinical summary for recurrence location:

Recurrence is localized in (select all that apply)

- unknown recurrence location
- the prostate bed
- pelvis outside of prostate bed and/or intrapelvic lymph nodes
- extrapelvic soft tissue, lymph nodes and/or organ metastases (non-bone)
- bone

2. Did the ⁶⁸Ga-PSMA PET enable you to avoid any test or procedure?

- Yes
- No

If yes, which test/procedure was avoided? _____

3. Did the ⁶⁸Ga-PSMA PET result in any additional test or procedure?

- Yes
- No

If yes, which test/procedure was added? _____

4. Did ⁶⁸Ga-PSMA PET findings trigger a planned biopsy?

- Yes
- No

5. Based on ⁶⁸Ga-PSMA PET findings what is your treatment plan? (select all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Surgery | <input type="checkbox"/> Radionuclide therapy (Ra-223) |
| <input type="checkbox"/> External-beam radiation therapy | <input type="checkbox"/> Bone targeted therapy |
| <input type="checkbox"/> ADT for hormone dependent cancer | <input type="checkbox"/> Modify dose of existing therapy |
| <input type="checkbox"/> Abiraterone/Enzalutamide | <input type="checkbox"/> Active surveillance |
| <input type="checkbox"/> Chemotherapy | <input type="checkbox"/> Other (please describe below) |

Other: _____

Referring Physician Name: _____

Date: _____ Signature: _____

Supplemental Figure 3: Q3 survey

Q3: SURVEY 3 TO 6 MONTHS AFTER PSMA PET/CT

Ga-68 PSMA-11 SCAN BCR

PATIENT INFORMATION	
Last name: _____	First Name: _____
Date of Birth: _____	Medical Record Number: _____

1. On the post scan questionnaire (questionnaire #2) you indicated an intended treatment management of:

- | | |
|---|--|
| <input type="checkbox"/> Surgery | <input type="checkbox"/> Radionuclide therapy (Ra-223) |
| <input type="checkbox"/> External-beam radiation therapy (EBRT) | <input type="checkbox"/> Bone targeted therapy |
| <input type="checkbox"/> Modify EBRT planning | <input type="checkbox"/> Modify dose of existing therapy |
| <input type="checkbox"/> ADT for hormone dependent cancer | <input type="checkbox"/> Active surveillance |
| <input type="checkbox"/> Abiraterone/Enzalutamide | <input type="checkbox"/> Other (please describe below) |
| <input type="checkbox"/> Chemotherapy | |

Other: _____

2. Please indicate whether the intended management noted on the post scan questionnaire (questionnaire #2) was implemented:

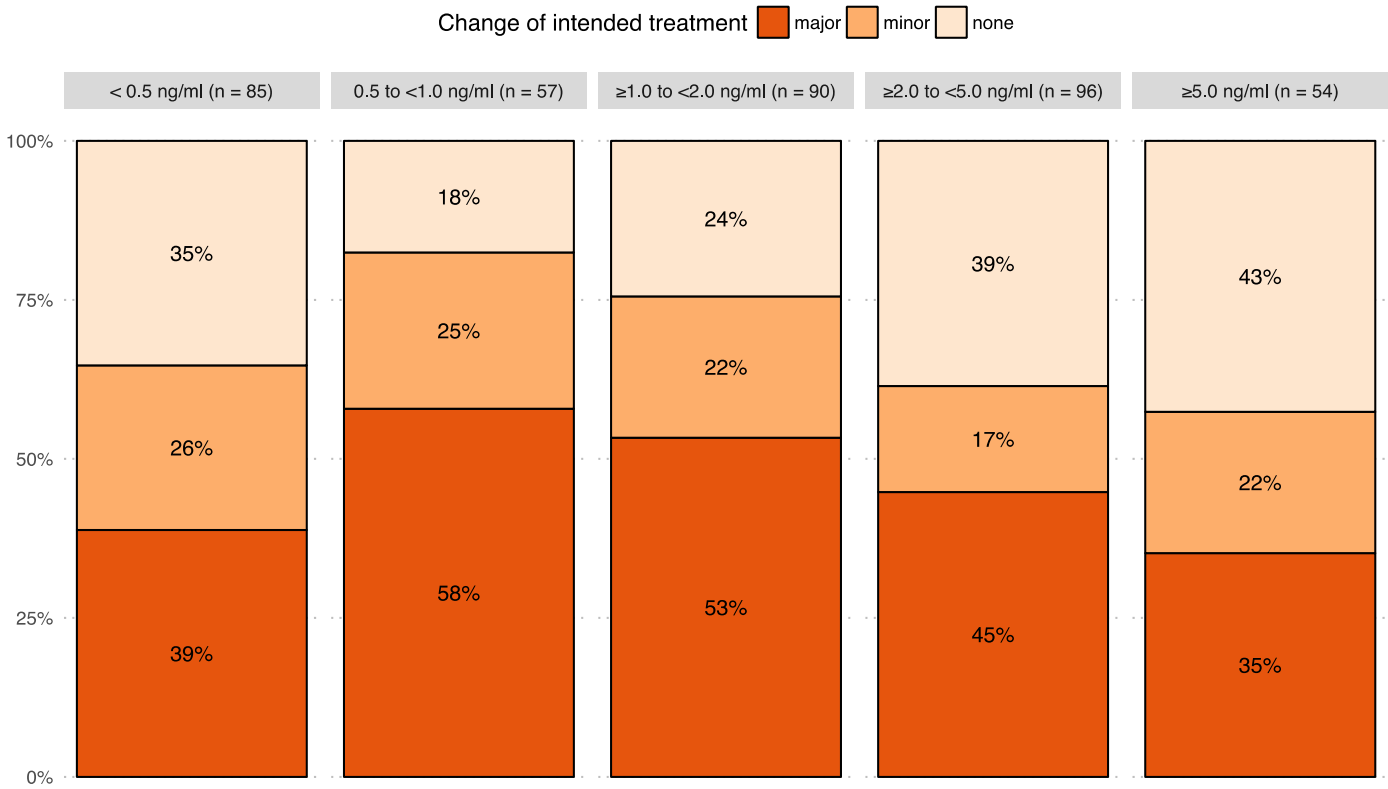
- Yes
 No

If No, please indicate why: _____

Referring Physician Name: _____

Date: _____ Signature: _____

Supplemental Figure 4: Intended management change after PSMA PET stratified by PSA



Supplemental Figure 5: Sankey diagram for pre- to post-PET change of intended management (n=382)

