Introduction to MUSIC’s new performance measures for Active Surveillance

In an effort to measure our progress and provide participants with feedback on their management of men with favorable-risk prostate cancer across MUSIC, four new quality measures have been developed and added to the registry. Detailed visualizations and trends are available behind the secure login on the registry website at: musicurology.com.

These measures were developed with input from members of the Active Surveillance working group, patient advocates, and urologists across the state. The overarching goal is to provide data-driven insights into Active Surveillance performance across the collaborative for men who meet MUSIC’s AS appropriateness criteria (see below). A brief introduction to each measure is included below.

Measure 1 – Consideration of AS among eligible patients

Rationale for measure: We will assess the rate of consideration of Active Surveillance enrollment among all men meeting Gleason score and tumor volume criteria as outlined by the MUSIC panel on the appropriateness of AS. The intent of this measure is to define and monitor the proportion of eligible men who undergo confirmatory testing in anticipation of AS (implying consideration of AS based on MUSIC Roadmap guidelines) and/or ultimately proceed with AS rather than definitive treatment. This measure reflects the intent of considering AS at the time of diagnosis and initial treatment decisions. This measure has the possibility of being used for longitudinal reporting for VBR and for comparative trend analyses with other registries.

Numerator: Men with Active Surveillance listed in the registry for primary treatment and NO secondary treatment listed within 6 months of diagnosis and men who receive confirmatory testing in anticipation of AS (regardless of whether they proceed with AS or definitive therapy).

Denominator: All actively-followed men with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) and 6 months of follow-up since diagnosis. (Note: The Gleason score and tumor volume categories reflect the MUSIC appropriateness criteria).
Measure specific notes: Men who choose watchful waiting for management are excluded from this measure.

Measure 2 – Confirmatory tests in AS eligible patients (Rate of confirmatory testing)

Rationale for measure: This measure will assess the frequency of confirmatory testing within 6 months of diagnostic biopsy for all men with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer). This rate intends to measure the quality of risk assessment among men considered eligible for AS, as well as the intent to consider AS in the same population.

Numerator: AS-eligible men actively followed with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) receiving either a repeat prostate biopsy, prostate MRI, or genomics testing within 6 months of the date of diagnosis.

Denominator: All actively-followed men with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) and 6 months of follow-up since diagnosis.

Measure specific notes: Confirmatory testing is defined as receipt of a repeat prostate biopsy, prostate MRI, or genomics testing within 6 months of diagnosis date. Men who present from a referring location after receiving both a diagnosis and confirmatory test will be excluded from the denominator of this measure. Men who present from a referring location more than 5 months after diagnosis will also be excluded. Men who choose watchful waiting for management are excluded from this measure but all other men meeting criteria for denominator are included regardless of treatment choice.

Measure 3 – Rate of “verified” AS (Rate of AS, regardless of confirmatory testing, based on lack of definitive treatment within 6 months of diagnosis)

Rationale for measure: This measure includes AS eligible men placed on AS with or without confirmatory testing.

Numerator: AS eligible men actively followed with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) placed on AS without confirmatory testing with no active treatment 6 months after diagnosis and AS eligible men actively followed with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) continued on AS after confirmatory testing and no active treatment for 6 months.

Denominator: All actively-followed men with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) and 6 months of follow-up since diagnosis.

Measure specific notes: Confirmatory testing is defined as receipt of a repeat prostate biopsy,
prostate MRI, or genomics testing within 6 months of diagnosis date. Men who present from a referring location after receiving both a diagnosis and confirmatory test will be excluded from the denominator of this measure. Men who present from a referring location more than 5 months after diagnosis will also be excluded. Men who choose watchful waiting for management are excluded from this measure but all other men meeting criteria for denominator are included.

**Measure 4 – Rate of treatment within 6 months of diagnosis among AS eligible men who undergo confirmatory testing within 6 months of diagnosis**

**Rationale for measure:** This measure will track the proportion of men who receive active treatment after confirmatory testing to monitor relevance of confirmatory testing to treatment decision.

**Numerator:** Numbers of AS eligible men who receive active treatment with 6 months after undergoing confirmatory testing within 6 months of diagnosis

**Denominator:** Number of AS eligible men who undergo confirmatory testing within 6 months of diagnosis.

**Measure specific notes:** Confirmatory testing is defined as receipt of a repeat biopsy, prostate MRI, or genomic testing within 6 months of diagnosis date. Men who present from a referring location after receiving both a diagnosis and confirmatory test will be excluded from the denominator of this measure. Men who present from a referring location more than 5 months after diagnosis will also be excluded. Men who choose watchful waiting for management are excluded from this measure but all other men meeting criteria for denominator are included.

**Measure 5 – Performance of recommended follow-up evaluations**

**Rationale for measure:** In this measure we seek to understand the frequency of follow-up that men receive while on Active Surveillance

**Numerator:** Number of men who receive 1 tumor burden reassessment AND 3 repeat PSA tests within 42 months of diagnosis

**Denominator:** AS eligible men actively followed with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) placed on AS without confirmatory testing with no active treatment 6 months after diagnosis and 42 months of follow-up since diagnosis and AS eligible men actively followed with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) continued on AS after confirmatory testing and no active treatment for 6 months and 42 months of follow-up since diagnosis.

**Measure specific notes:** Tumor burden reassessment is defined as either a prostate biopsy or a prostate MRI. Two tumor burden reassessments is used for the numerator as the first of those tests would be the confirmatory test. The MUSIC roadmap lists a high-intensity follow-up plan and a low-
intensity plan as options for men enrolled on AS. If the low-intensity plan is followed, then despite follow-up consistent with that plan the frequency of follow-up would be less than called for in this measure. This may lead to lower performance for some urologists despite appropriate follow-up. To appropriately ascertain follow-up for men on the low-intensity plan, we would require at least 40 months of follow-up data. At present, the number of men in the registry meeting that requirement is very low. Over time this measure will be updated to better account for the two follow-up plans, but the current goal is to give a preliminary idea of follow-up on AS across the collaborative recognizing this measure is somewhat limited for those using the low-intensity follow-up plan.

**Measure 6 – Rate of transition to secondary treatment**

**Rationale for measure:** We will measure the rate of transition to secondary treatment to provide insight on the attrition rate for men on AS over time.

**Numerator:** Number of men who receive a secondary treatment (including: radical prostatectomy, external beam radiation, brachytherapy, androgen deprivation, HIFU, cryotherapy, cystoprostatectomy, chemotherapy OR immunotherapy) within 24 years of diagnosis.

**Denominator:** AS eligible men actively followed with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) placed on AS without confirmatory testing with no active treatment 6 months after diagnosis with at least 24 months of follow-up since diagnosis and AS eligible men actively followed with a new diagnosis of either Gleason 3+3 cancer of any volume OR low volume Gleason 3+4 disease (i.e. 3 cores or less with cancer and no core comprised of >50% cancer) continued on AS after confirmatory testing and no active treatment for 6 months with at least 24 months of follow-up since diagnosis.

**Measure specific notes:** This measure will report rate of conversions to other treatment and also the median follow-up duration for men in a provider’s cohort of AS patients.