



**To:** UCM Medical Staff, Housestaff, Nursing Staff, Patient Care Centers, and Outpatient Clinics

**From:** KT Jerry Yeo, PhD, DABCC, FAACC, Medical Director, Clinical Chemistry Laboratories  
 Scott Eggener, MD, Vice-Chair, Urology

**Subject:** Removal of free PSA Interpretation Table

**Effective Date:** 4/5/2023

**Laboratory Section:** Clinical Chemistry

**Summary:**

Laboratory assays measuring free prostate specific antigen (fPSA) will no longer be reported with information on the risk of overall prostate cancer.

A significant proportion of prostate cancers are low-risk and carry minimal risk. Thus, these cancers are clinically insignificant, and current guidelines recommend surveillance rather than treatment.

While the ratio of fPSA to total PSA can predict risk of prostate cancer, the risk table currently in use does not discriminate between clinically significant and insignificant cancers. As such, the percentages presented in this table overstate the risk of a significant prostate cancer. This is not helpful for clinicians, who primarily want to identify clinically significant cancers. Therefore, use of this table may result in overdiagnosis, overtreatment, and unnecessary patient anxiety.

In addition, presentation of the values in this table creates a false representation of fPSA as a dichotomous variable, when it should ideally be interpreted on a continuous spectrum. For these reasons, the table will no longer be presented with fPSA results in the IT system.

An example of the information that will now be omitted is shown in the following screenshot in the red box below:

Component	Ref Range & Units	1 d ago (3/30/23)	1 d ago (3/30/23)	1 yr ago (11/23/21)	3 yr ago (8/20/19)	14 yr ago (9/4/08)
PSA, Free	ng/mL	0.33	0.34	0.34 <sup>CM</sup>	0.20	
PSA, Total	0 - 4.0 ng/mL	1.59	1.62	1.56 <sup>CM</sup>	0.73	0.27
Free/Total PSA Ratio	>0.25	0.21 <sup>v</sup>	0.21 <sup>v</sup> <sup>CM</sup>	0.22 <sup>v</sup> <sup>CM</sup>	0.27 <sup>CM</sup>	

Comment: Approximately 25% of asymptomatic males (age 50 years or greater) with PSA levels of 4.1-10.0 ng/mL have prostate cancer, compared to approximately 12% of those with PSA levels of 2.0-4.0 ng/mL. Free/total PSA ratios may help further classify into subgroups with higher or lower cancer rates:

PSA (ng/mL)	Free/Total	Cancer Rate
4.1-10.0	<0.10 >0.25	>40% <10%
2.0-4.0	<0.10 >0.18	>30% <10%

Serum tumor markers are not specific for malignancy, and should always be interpreted in conjunction with other diagnostic and clinical findings. Results may vary with test methodology.

Resulting Agency	UCH	UCH	UCH	UCH	UCH
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**Questions:** If there are any questions regarding the change please contact:

- Dr. Jerry Yeo from Clinical Chemistry ([jyeo@bsd.uchicago.edu](mailto:jyeo@bsd.uchicago.edu)) or
- Dr. Scott Eggener from Urology ([seggener@uchicago.edu](mailto:seggener@uchicago.edu))