INTRODUCTION AND OBJECTIVES: Although routine screening is not recommended for patients over 70 for prostate cancer (PCa), prostate biopsies (PBx) are performed and may be indicated under certain circumstances. We sought to evaluate the indications and peri-procedural outcomes of elderly patients that underwent PBx using registry data from the Michigan Urologic Surgery Improvement Collaborative (MUSIC).

METHODS: One of MUSIC’s initiatives is to reduce prostate biopsy complications. We analyzed patients who underwent an initial PBx from January 2012 to August 2019, examining data related to indications, complications, and emergency department (ED) visits. Age was stratified to < 55, 55 - 70, and > 70 years of age and bivariable analysis was performed.

RESULTS: The analysis included 59,104 patients who underwent a PBx. Stratified by age, 6,273 (10%), 38,577 (65%), and 14,254 (24%) were <55, 55-70, and >70 years old, respectively. Among the age groups, the overall frequency of complications was not different (p = 0.18). Notably, elderly patients were more likely to develop urinary retention (p = <0.0001). Those over 70 did present to the ED more frequently (p = 0.05), however, there was no difference in readmission rates (p = 0.06).

CONCLUSIONS: This analysis provides insight into the safety profile of a prostate biopsy in the elderly. Though no difference in overall complication rate was found, patients over 70 were more likely to develop urinary retention and go to the emergency department, which will help guide informed consent. Further review is needed to assess the utility of a biopsy in these patients in terms of impact on survival and quality of life.
<table>
<thead>
<tr>
<th></th>
<th>&lt;55</th>
<th>55-70</th>
<th>&gt;70</th>
<th>Total</th>
<th>p value</th>
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</thead>
<tbody>
<tr>
<td>Patients (%)</td>
<td>6,273 (11)</td>
<td>38,577 (65)</td>
<td>14,254 (24)</td>
<td>59,104</td>
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<tr>
<td>Complications (%)</td>
<td>274 (4.4)</td>
<td>1,542 (4)</td>
<td>611 (4.3)</td>
<td>2,427 (4.1)</td>
<td>0.18</td>
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<tr>
<td>Sepsis</td>
<td>42 (0.7)</td>
<td>186 (0.5)</td>
<td>66 (0.5)</td>
<td>294 (0.5)</td>
<td>0.12</td>
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<tr>
<td>Fever</td>
<td>92 (1.5)</td>
<td>423 (1.1)</td>
<td>132 (0.9)</td>
<td>647 (1.1)</td>
<td>0.003</td>
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<tr>
<td>Urinary tract infection</td>
<td>62 (1)</td>
<td>334 (0.9)</td>
<td>150 (1.1)</td>
<td>546 (0.9)</td>
<td>0.12</td>
</tr>
<tr>
<td>Retention</td>
<td>28 (0.5)</td>
<td>273 (0.7)</td>
<td>158 (1.1)</td>
<td>459 (0.8)</td>
<td>&lt; 0.0001</td>
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<tr>
<td>Other</td>
<td>160 (2.6)</td>
<td>879 (2.3)</td>
<td>316 (2.2)</td>
<td>1,355 (2.3)</td>
<td>0.32</td>
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<tr>
<td>Positive Result</td>
<td>2,910 (46)</td>
<td>20,269 (53)</td>
<td>9,198 (65)</td>
<td>32,377 (55)</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>ED visits</td>
<td>110 (1.8)</td>
<td>638 (1.7)</td>
<td>281 (2)</td>
<td>1,029 (1.7)</td>
<td>0.05</td>
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<td>Readmissions</td>
<td>76 (1.2)</td>
<td>368 (1)</td>
<td>161 (1.1)</td>
<td>605 (1)</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Table 1. Prostate biopsy outcomes, complications, ED visits, and readmission stratified by age