A new report by the Urban Institute in Washington, D.C. estimates that the defendants were innocent in 11.6% percent of rape and rape-murder convictions in Virginia from the 1970s and 1980s. The origins of this study go back several decades.

From 1973 to 1987, Mary Jane Burton, an analyst at the Virginia Department of Forensic Science (DFS)—and several younger colleagues she trained—taped or stapled swabs from rape kits, pieces of clothing with biological stains, and other bits of physical evidence into the manila file folders that contained the records of thousands of murder and sexual assault cases. Decades later, after DNA testing had become a routine method of identifying the perpetrators of violent crimes, these “Mary Jane Burton files” were rediscovered. In some cases, they provided the only biological samples that could be found and used for post-conviction DNA testing, which led to several exonerations of innocent rape and murder defendants.

In 2005, in light of these exonerations, Virginia Governor Mark Warner ordered DFS to test all DNA samples in those files and to identify any additional defendants who were falsely convicted—a massive undertaking that required sorting through many thousands of files. Eventually, DFS conducted DNA tests in 715 murder or rape cases, where convictions occurred from 1973 to 1987.

Because rapists usually leave semen that can be used for testing, DNA identification is most likely in cases that include a rape. Therefore, for this study, the Urban Institute focused on 430 convictions for rape or convictions for murder in cases in which a victim was also raped. Of those 430 cases, only 231 could be used because they “yielded determinate post-conviction DNA outcomes”—meaning that the rapist’s DNA profile was identified and there was a sample of the defendant’s DNA to which that profile could be compared.

An earlier report by the Urban Institute in 2012 concluded that the data from these DNA tests are “supportive of exoneration in between 8 and 15 percent” of the rape and murder convictions examined. The current report improves on that initial estimate by gathering more data about the cases, focusing more narrowly on the question at hand and using more sophisticated techniques to generalize from the 231 cases with useable DNA tests to the entire set of 430 convictions.

The Urban Institute researchers note that their finding that 11.6% of these defendants were innocent may be overstated to some extent because, despite their best efforts, they may have missed some cases in which a defendant who was excluded by DNA might have been guilty nonetheless. In addition, it’s possible that in the 1970s and 1980s, a substantial number of rape and murder convictions in Virginia were obtained without sending any materials to DFS for testing. If those cases were less likely to include innocent defendants than the cases that are in the DFS files, the overall rate of false convictions from that period would be lower than the Urban Study estimate.

Despite these limitations, this report is highly important. The best estimate of the rate of false conviction in any context comes from a 2014 study that estimated that 4.1% of defendants sentenced to death in the United States from 1973 through 2004 were innocent. Even if the Urban
Institute estimate is overstated, it contributes to a growing consensus that the rate of false convictions for all serious felonies in the United States is somewhere in the range from 1 to 5%.

Nowadays, DNA testing before trial is routinely used to identify rapists and to exclude innocent rape suspects. As a result, the actual false convictions identified using the Mary Jane Burton files would be much less likely to occur if the same crimes were investigated today. But DNA testing is only available for a small minority of crimes, and those without DNA are as likely to produce wrongful convictions as ever.

The main takeaway is obvious. More than 1,600,000 inmates are serving time in American prisons for felony convictions; about one million defendants are convicted of felonies each year. If as few as 2% of convicted felony defendants are innocent, that would mean that tens of thousands of prison inmates are innocent, and tens of thousands more are convicted every year.

The 2,134 exonerations we list in the registry occurred over a period of 29 years. They are highly important, but a drop in the bucket of convictions of innocent defendants that never come to light.

- Samuel Gross, 05 December 2017