Doctor, Did you look at that X-ray? Tools to Reduce Image and Report Mismatch Errors

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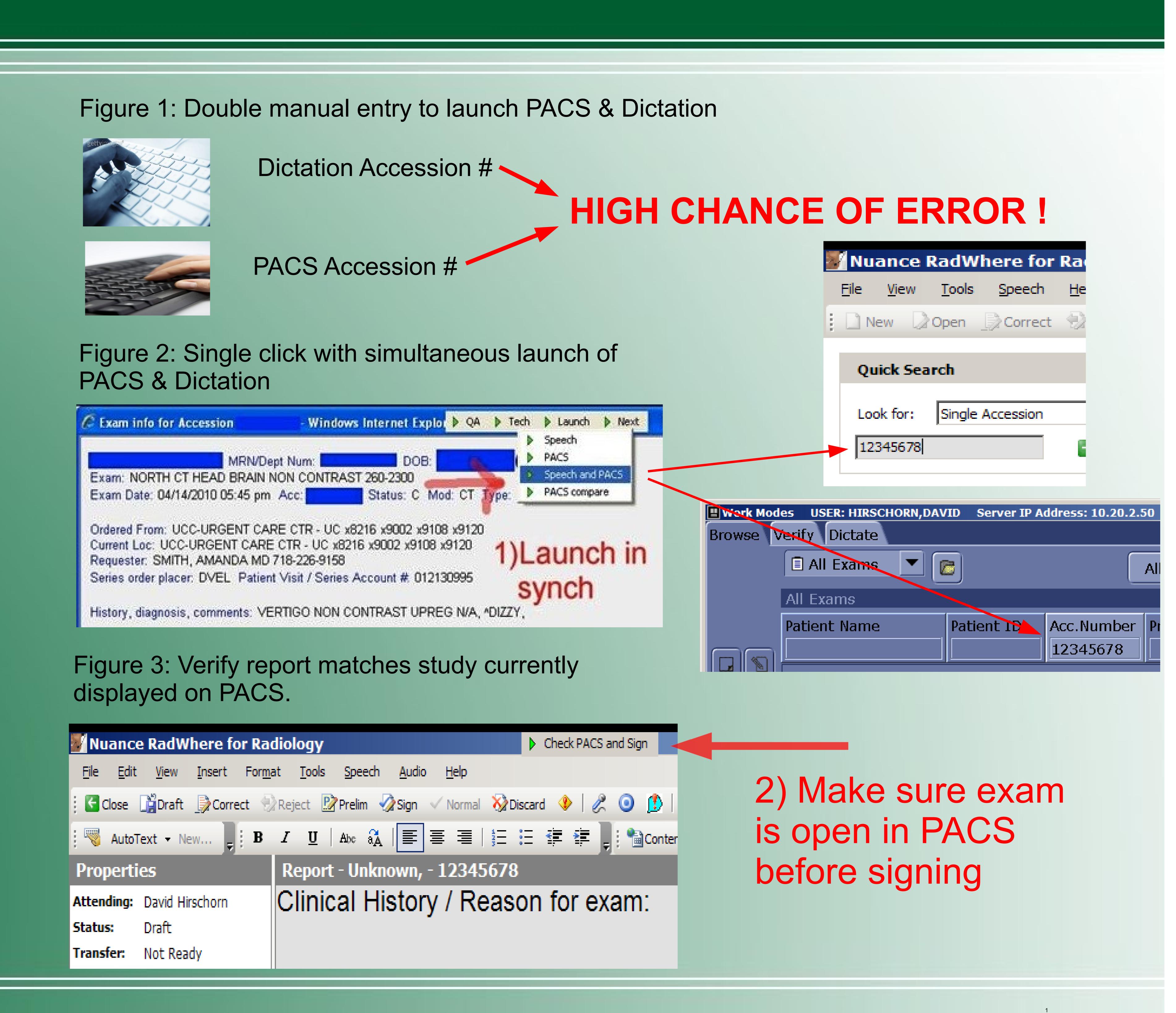


PURPOSE: The advent of computer driven dictation systems and PACS has allowed radiologists to keep up with increasing volume. As the use of these systems proliferates, so does the potential for medical errors due to mismatch of the exam selected in the reporting system and the exam displayed on the PACS. It is incumbent upon the radiologist to make sure that these systems are "in sync", but without good tools to prevent errors, mistakes will invariably creep in. This is especially so if radiologists manually enter exam accession numbers into these systems (Figure 1). We developed 2 software tools to prevent these errors.

METHODS: The first software tool (Figure 2) was developed using QuickMacros desktop macro scripting software to allow automated passing of the accession number from the web based RIS driven worklist to both the PACS and the dictation system. We had tried to get our RIS and dictation system vendors to build an integration, but we could not wait any longer, so we built it ourselves, very quickly and cheaply. By automatically passing the accession number to both systems, it launches the same exam at the same time on both systems, minimizing room for error. This step alone caused a major reduction in mismatches due to erroneous entry of the accession number.

The second tool (Figure 3) is a simple button to check the synchronization of the PACS and dictation system immediately before signing off. Also developed using desktop macro scripting software, the "Check and Sign" button appears at the top of the dictation application. It first checks to make sure the report accession number which is about to be signed off in the dictation application is currently open in PACS. If it is, then it proceeds to sign-off on the report the same was as if the radiologist had signed off him/herself. But if not, it displays a warning on the screen that the exam is not currently open on PACS and does not sign off on the report. At that point the radiologist can choose to bypass the warning if appropriate.

In order to augment compliance with these safety measures, auditing was put in place to keep track of usage of these tools, and the radiologists were notified that their utilization of these safety tools was being audited. Clearly, mismatch mistakes that occur despite the usage of error-reducing tools will be viewed differently than ones that occur when they are not used.



CONCLUSION: Tools to prevent medical errors such as mismatch between radiology reports and images are absolutely necessary as dictation systems become computer driven and volumes increase.