

## *Optional Feature*

**Product:** PowerScribe 360 Reporting  
**Version:** 4.0 and higher  
**Subject:** Quality Check User Guide

**Doc. Num:** P36P035b  
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## Overview

*Quality Check* for *PowerScribe 360 Reporting* checks your report for common errors in consistency, identifies these errors, and allows you to review and/or correct them prior to signing your report.

The *Quality Check* feature checks for the following discrepancies:

- **Laterality mismatch:** Identifies places in the report where, for example, the exam was for the **left** side but the radiologist said **right**.
- **Gender mismatch:** Identifies places in the report where, for example, the exam was for a **male** and the radiologist said **female**.
- **Critical test result/actionable findings notifications:** Identifies and highlights potential critical results dictated in a report.

## Quality Check Logic

The information in this section explains the methods *Quality Check* uses to validate consistency in your reports.

### Laterality Mismatch Logic

Laterality indicators, defined as **left** (or **lt** or **lft**) and **right** (or **rt** or **rght**), in conjunction with the anatomy noted in the procedure description (found in the meta-data), are used to tag laterality mismatches in a report.

Laterality mismatches adhere to the following conditions:

- If a report text contains past tense language when referring to a laterality, the laterality will not be tagged.
- Only **left** or **right** indicators that have a *strict syntactic relation* with the body part will produce a mismatch (assuming that the order is for the mentioned body part). For example: a procedure description containing **Left lower extremity** will not tag **right arm** or **right leg and arm** in the text as a mismatch. However, it will tag **right leg**.

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- A mismatch is created if the body part in the report text is a subpart of the anatomy mentioned in the order. For example: a procedure description with **Left lower extremity** will not tag **right arm** as a mismatch. However, it will tag **right ankle**.
- If the procedure description contains the word **mammogram**, the description is considered a procedure on the breast. In this case, the laterality in the text has to be combined with the body part **breast** to be tagged as a mismatch.
- If the procedure description contains only laterality (no anatomy), all opposite laterality in the text are tagged. For example: **left views** in the procedure description will list all **right** words contained in the report text.
- Laterality defined in the procedure *code* (as opposed to the procedure *description*) of the meta-data is **not** used for a laterality mismatch.
- Anatomy in the procedure description meta-data has to be spelled out fully and correctly (for example: **extremity**) and not abbreviated in any manner.
- *Quality Check* tags laterality mismatches within the report's content based on differences in laterality/body site pairs for a specific finding in the report's Findings section (or subsections thereof) compared with the report's Impression section (or subsections thereof). The words describing the laterality/body part/finding must be *strictly syntactically related within the sentence*.

For example: A laterality mismatch is created if the Findings section states **fracture in the left hand** while the Impression section states an **open fracture of the right index finger**. However, a laterality mismatch is *not* created if the Findings section states **severe pain in the left hand** while the Impression section states a **fracture of the right hand**, because the finding is not identical.

- In the case of multiple procedure descriptions for a single report, *all* of the procedure descriptions are considered before determining whether a laterality mismatch is present.
- If the laterality in the procedure description meta-data is described by *both* laterality indicators (**left and right** or **bilateral**), a laterality mismatch will *not* be created.
- If the laterality in the procedure description meta-data is defined only as **unilateral**, a laterality mismatch will *not* be created.

## Gender Mismatch Logic

Gender mismatches are based on a patient's gender information available within the patient's demographic meta-data. This information is then compared with patient references (female/male, he/she/his/her), gender-specific findings, and gender-specific body parts contained in the report text.

Opposite gender terms are tagged as mismatches based on the following conditions:

- No gender mismatch is created on a patient reference (female/male, he/she/his/her) if the sentence preceding the gender text has a reference to a physician, nurse, or other healthcare providers. For example, no gender mismatch is generated in the sentences, "I discussed this issue with Dr. Jones. *He* informed me . . ."
- No gender mismatch is created on a patient reference that is in a sentence describing communication with the patient, the patient's family, nurse, physician, and so on. For example, no gender mismatch is generated in the sentences, "Patient reports that *she* twisted her left ankle when falling down stairs 3 days ago." or "This was discussed with the patient and *she* understands the required follow-up visit."
- The age of the patient is a determining factor in whether or not gender-specific findings will be flagged as a gender mismatch.
  - For *all* female patients, gender-specific findings (for example, pregnancy-related finding) or gender-specific body parts are used.
  - For *male patients 8 years of age or older*, all gender-specific body parts and almost all findings are used to trigger a gender mismatch. Exceptions include some pregnancy-related findings that describe the fetal position (for example, **breech**) or an assisted delivery (for example, **forceps delivery**) since these conditions can be described in the report of both the mother or the child.
  - For *male patient younger than 8 years old*, pregnancy-related findings will *not* cause a mismatch. The assumption is that if such a term occurs in a report on a young male child, the term can be related to the birth or the development of the fetus during pregnancy. For non-pregnancy related terms that indicate a gender (for example, **uterus**) there is no age cutoff.
  - Pregnancy-related findings include terms that are related to (but are not limited to) pregnancy, childbirth, menstrual and menopausal periods, and gynecologic or obstetric examinations or procedures.
- If gender is not available in the meta-data (unknown or empty), *Quality Check* tags gender mismatches based on any gender identification inside the report data (usually containing words such as **female/male** but also on **he/she/his/her**). For example, "Patient is a 30 year-old *female*."
- Gender meta-data supports only **Male**, **Female** and **Unknown** types. All other gender types, for example *Other*, will be recognized as **Unknown**.
- If gender data is **Unknown**, *Quality Check* does not list any gender mismatch results.

## Critical Results Logic

*Quality Check* identifies and highlights potential critical results dictated in a report.

Critical Results logic adheres to the following conditions:

- Only identifies Critical Results contained in the report text.
- The terms are based on the Mass Coalition for the Prevention of Medical Errors worksheet (click the link below to download this list).
  - <http://www.macoalition.org/Initiatives/docs/CTRstarterSet.xls>
- Critical results will *not* be identified in **Subjective**, **Comparison**, or **Reason for Exam** report sections (or subsections thereof).
- Critical results terms identified as past tense are *not* included in the list.
- Critical results will *not* be identified if there is language indicating that the finding is not new or has not worsened compared with a previous exam. Examples include words such as: again, old, healing, re-demonstration, similar or same to prior or previous exam, known, chronic, stable, and so on.
- Critical results and actionable findings can be tagged on the same language in the text. For example, the words *cerebral hemorrhage* in the text will be tagged with the Critical Result RAD : 83230397 : CEREBRAL HEMORRHAGE, and with the Actionable Finding RAD : 83229549 : INTRACRANIAL OR SPINAL HEMORRHAGE (PARENCHYMAL, SUBARACHNOID, SUBDURAL, EPIDURAL).
- For *malignancy* and *pulmonary nodule* (RAD : 83230580 : MALIGNANCY ; RAD : 83230195 : LUNG NODULE OR SUSPECTED LUNG NODULE, NOT CLEARLY BENIGN; RAD : 83230113 : PROBABLE MALIGNANCY, ANY LOCATION, NO ACUTE DANGER TO PATIENT; RAD : 83229773 : FINDING HIGHLY SUGGESTIVE OF MALIGNANCY), no critical result or actionable finding is identified if *metastasis* is mentioned in the document.
- *Quality Check* recognizes the **BI-RADS Category Definitions** section as an informative section. As a result, the words **malignancy**, **birad4**, or **birad5** are not recognized as critical results or an actionable findings in this section.

## Actionable Findings Logic

*Quality Check* identifies and highlights potential American College of Radiology (ACR) Actionable Findings dictated in a report.

Actionable findings logic adheres to the following conditions:

- Only identifies Actionable findings contained in the report text.
- The terms are based on the article “Actionable Findings and the Role of IT Support: Report of the ACR Actionable Reporting Work Group”, by P.A. Larson, et al., Journal of the American College of Radiology, June 2014 Volume 11, Issue 6, Pages 552–558. (Click the link below to view the article.)
  - [http://www.jacr.org/article/S1546-1440\(13\)00840-5/fulltext](http://www.jacr.org/article/S1546-1440(13)00840-5/fulltext)
- Actionable findings will *not* be identified in **Subjective**, **Comparison**, or **Reason for Exam** report sections (or subsections thereof).
- Actionable findings terms identified as past tense are *not* included in the list.
- Actionable findings will *not* be identified if there is language indicating that the finding is not new or has not worsened compared with a previous exam. Examples include words such as: again, old, healing, re-demonstration, similar or same to prior or previous exam, known, chronic, stable, and so on.
- Critical results and actionable findings can be tagged on the same language in the text. For example, the words *cerebral hemorrhage* in the text will be tagged with the Critical Result RAD : 83230397 : CEREBRAL HEMORRHAGE, and with the Actionable Finding RAD : 83229549 : INTRACRANIAL OR SPINAL HEMORRHAGE (PARENCHYMAL, SUBARACHNOID, SUBDURAL, EPIDURAL).
- For *malignancy* and *pulmonary nodule* (RAD : 83230580 : MALIGNANCY ; RAD : 83230195 : LUNG NODULE OR SUSPECTED LUNG NODULE, NOT CLEARLY BENIGN; RAD : 83230113 : PROBABLE MALIGNANCY, ANY LOCATION, NO ACUTE DANGER TO PATIENT; RAD : 83229773 : FINDING HIGHLY SUGGESTIVE OF MALIGNANCY), no critical result or actionable finding is identified if *metastasis* is mentioned in the document.
- *Quality Check* recognizes the **BI-RADS Category Definitions** section as an informative section. As a result, the words **malignancy**, **birad4**, or **birad5** are not recognized as critical results or an actionable findings in this section.

# Communication Statement Logic



**Note:** When enabled, the Report Editing preference **Suppress Quality Check alert with communication** allows *Quality Check* to recognize when a communication statement is included in a report. If a communication statement is detected, *Quality Check* will not flag the critical result/actionable finding.

- Language in the text that contains a verb indicating communication, in combination with a proper name (typically a first and last name) or a reference to a clinician or nurse, is tagged as a communication.
- Notifications using fax, electronic systems, answering machines, departments, or voice mail are not tagged as communications. Communications to non-medical staff (secretary, clerks, and so on) are not tagged as communications unless the proper name of this person is mentioned.
- Language identified as a past communication (typically found in a report's history sections) or a future communication (such as *will be*) is not tagged.

## General

Spell check runs before *Quality Check* begins to identify the types of mismatches or before identifying critical results, communications, or actionable findings.

# Configuring Quality Check: Administrators

Administrators should check the following locations and items when configuring *Quality Check*.

## System Preferences (Setup > System Tab > Preferences)

### Workflow Tab

**Perform Quality Check at signoff** check box: Account level preference that administrators can set initially but can also be controlled by the individual providers in the client application.

### Permissions Tab

**Allow Quality Check** check box: Site level preference that controls *Quality Check* overall.

## Report Editing Tab

**Enable Quality Check types:** Allows you to include some, all, or none of the three available consistency checks (Critical Text Results; Gender Mismatches; and Laterality Mismatches)

**Suppress Quality Check alert with communication:** Controls alerts for actionable findings/critical results that already have a communication statement.

## Other Features Section (Setup > System Tab)

Although they do not contain the name *Quality Check*, make sure that the following fields contain valid numbers. These fields are required in order for *Quality Check* to function properly.

- **PowerShare License Token**
- **CLU License ID**

If these fields are not filled in, and you do not have the numbers, contact Nuance Technical Services.

## Other Services Tab (Setup > System Tab > Configuration)

Make sure that the **CLU Service URL** and **CLU Connection Type** fields are filled in. If these fields are blank and you do not have the required information, contact Nuance Technical Services.

## Quality Check CTR Filter Link (Setup > Sites)

In the *PowerScribe 360 Reporting* Admin Portal, configure the **Quality Check CTR Filter** (located under **Setup > Sites**) to limit the types of critical test results that are flagged. Select the check box next to the items for which you do not wish to be flagged. The example illustration below shows a partial list of the configurable items.

Site: CCH
Save and Close | Close Window

Select the critical test results that should be ignored by Quality Check. The checked items will *not* be flagged as critical test results when detected in the report text.

<input checked="" type="checkbox"/> 2nd tri placenta accreta/other	<input checked="" type="checkbox"/> Ectopic pregnancy (highly likely)	<input type="checkbox"/> Pneumonia
<input checked="" type="checkbox"/> 2nd tri previa or poss previa	<input checked="" type="checkbox"/> Embryonic/fetal demise	<input type="checkbox"/> Pneumothorax, no tension
<input checked="" type="checkbox"/> 3rd tri abnormal placenta	<input type="checkbox"/> Encephalitis	<input type="checkbox"/> Portal venous gas
<input type="checkbox"/> Abdominal infection/intervene	<input type="checkbox"/> Epiglottitis	<input type="checkbox"/> Prob brain mets, known cancer
<input type="checkbox"/> Abn routine OB US, no Rx	<input type="checkbox"/> Extremity occlusion/stenosis	<input type="checkbox"/> Probable malignancy
<input type="checkbox"/> Abnormal cord doppler/IUGR	<input type="checkbox"/> Facial Fx airway OK, repair	<input type="checkbox"/> Procedural adverse event
<input type="checkbox"/> Abnormal IUP for short FU	<input type="checkbox"/> Fetal demise	<input type="checkbox"/> Pulmonary embolism
<input type="checkbox"/> Abruptio placenta	<input type="checkbox"/> Finding for urgent notification	<input type="checkbox"/> Pulmonary embolus, unstable

# Configuring Quality Check: Providers

## Before You Begin

Make sure your administrator has enabled *Quality Check*. The feature must be enabled before you can use it or configure it.

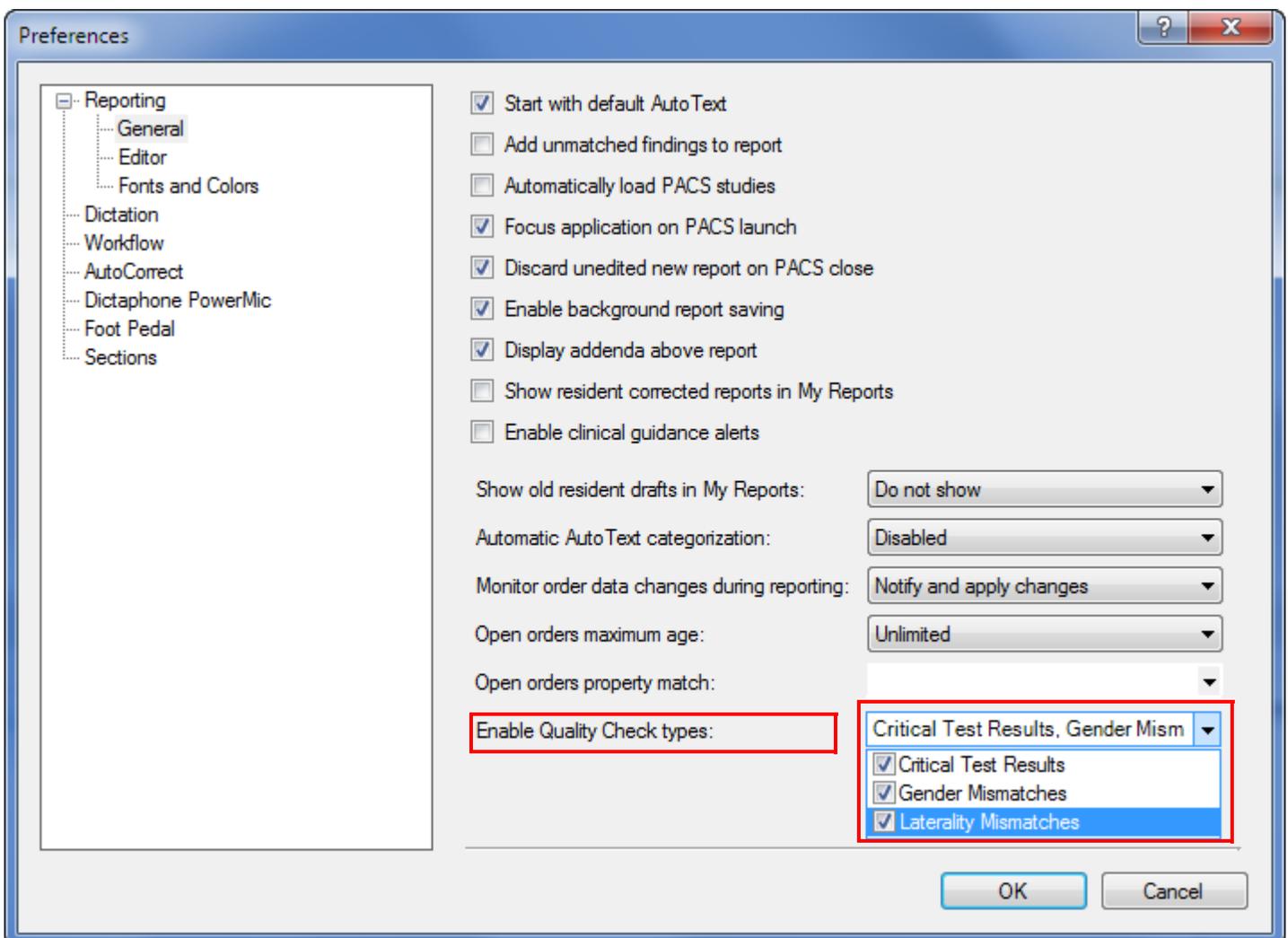
## Configure Quality Check

You can configure the following preferences for *Quality Check*:

- Choose one or more items on which to run your consistency check. Currently your choices are **Critical Test Results**; **Gender Mismatches**; and **Laterality Mismatches**.
- Configure *Quality Check* to run automatically or manually.

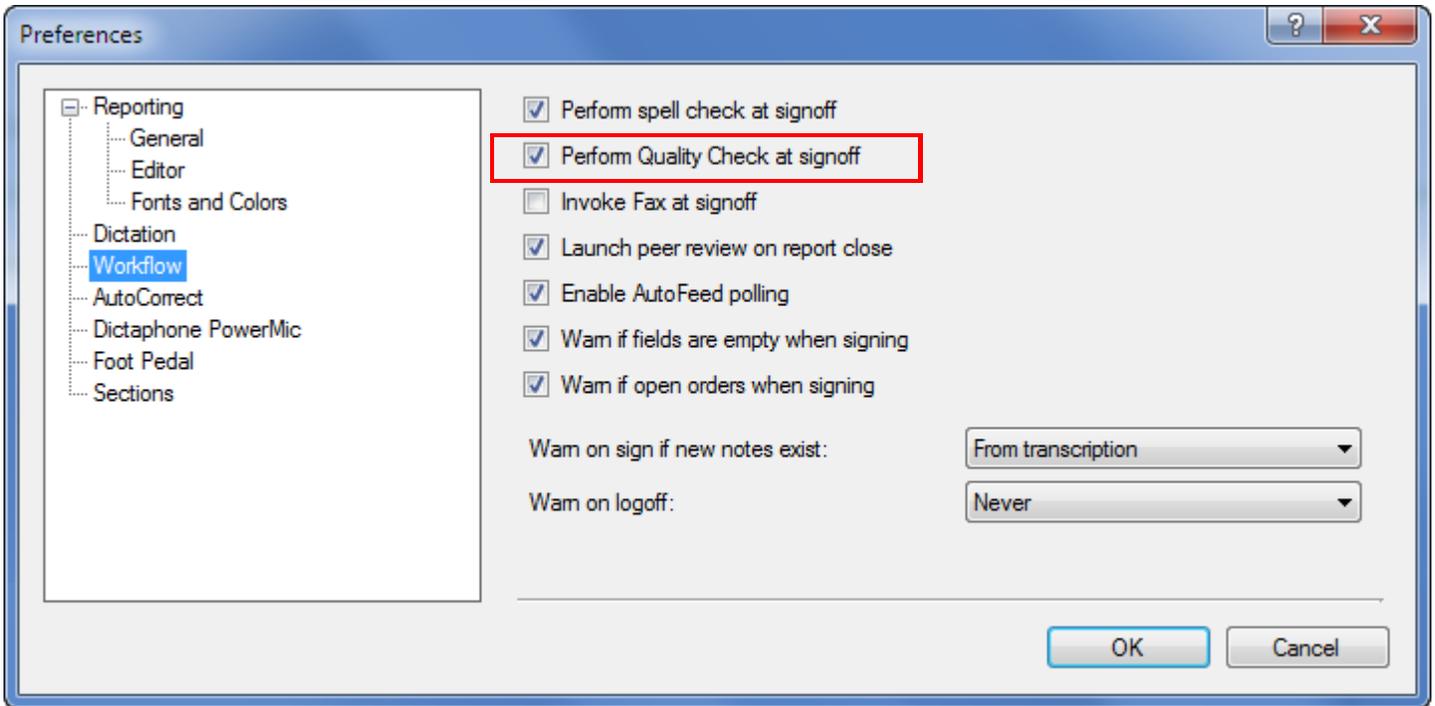
**To configure which items on which to run consistency checks:**

1. Click **Tools > Preferences > General**.
2. Click the drop-down arrow to the right of the **Enable Quality Check types** item.
3. Select (or clear) the check boxes based upon your specific requirements.



**To configure how *Quality Check* runs (automatically or manually):**

1. Click **Tools > Preferences > Workflow**.
2. Select (or clear) the **Perform Quality Check at signoff** check box.



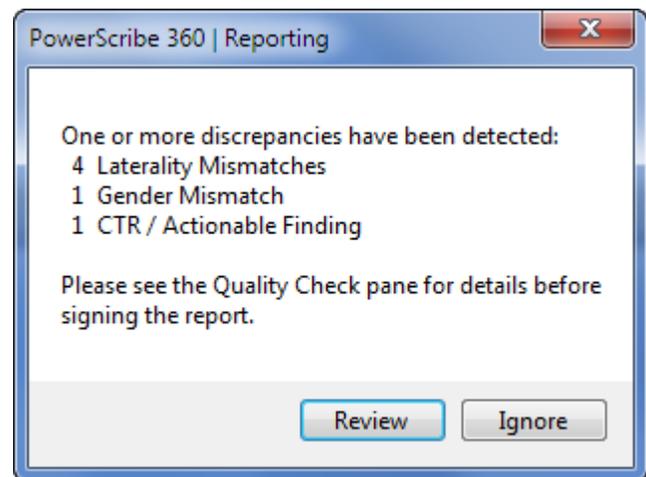
Use the information below when deciding how to configure *Quality Check*:

- If you select this check box, *Quality Check* is configured to run automatically, and runs when you begin your signature workflow from the Report Editor window. If no discrepancies are detected in the report, the *Quality Check* dialog box does not open, saving you a step in your signature workflow.
- If you clear this check box, *Quality Check* is configured to run manually. Use the voice command “**Start Quality Check**” to run the consistency check, or click the **Start Quality Check** icon  on the tool bar.

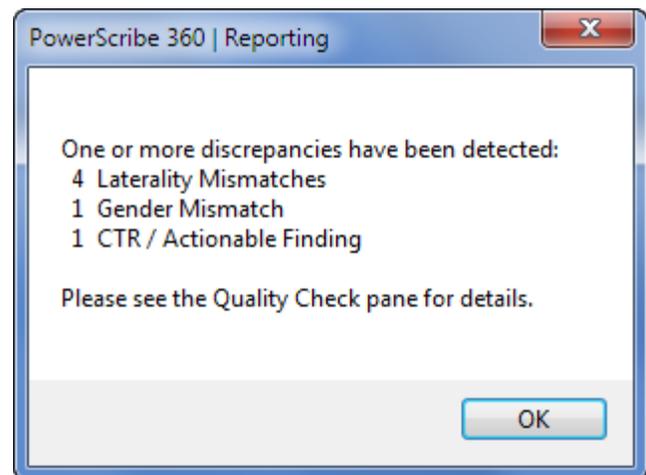
## Begin Using Quality Check

1. Dictate a report (or open an existing report).
2. When finished dictating, run the *Quality Check* consistency checker. (How you do this depends upon whether you configured your system to run the check automatically or manually).
  - If one or more discrepancies are found, a message box opens, displaying the number of each type of discrepancy found.
    - When you configure your system to run *automatically*, this message box contains two options: **Review** returns you to the Report Editor where you can make corrections, while **Ignore** allows you to continue with your signature workflow without making any corrections.
    - When you configure your system to run *manually*, this message box contains an **OK** button, which returns you to Report Editor and allows you to make any necessary corrections.

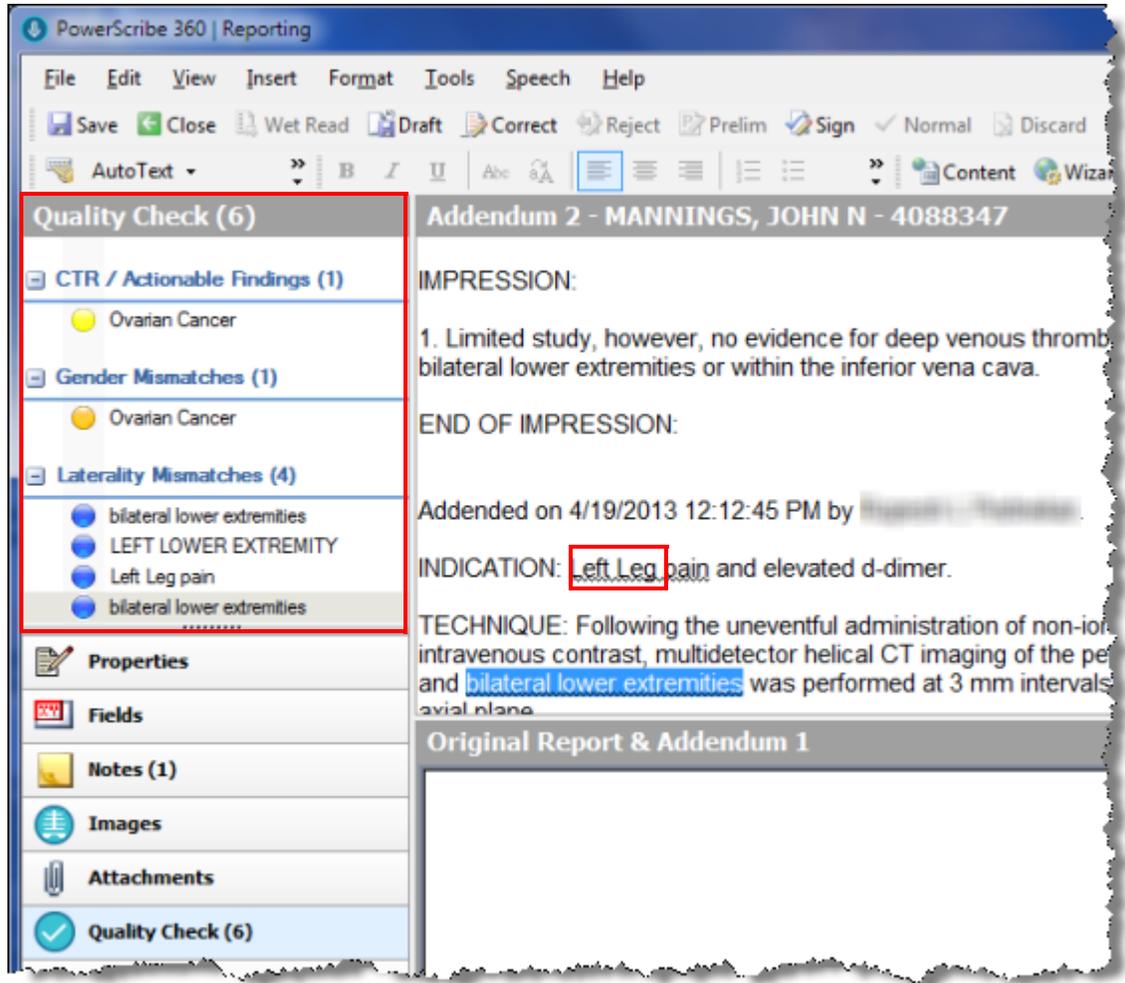
*When run automatically (at signature)*



*When run manually*

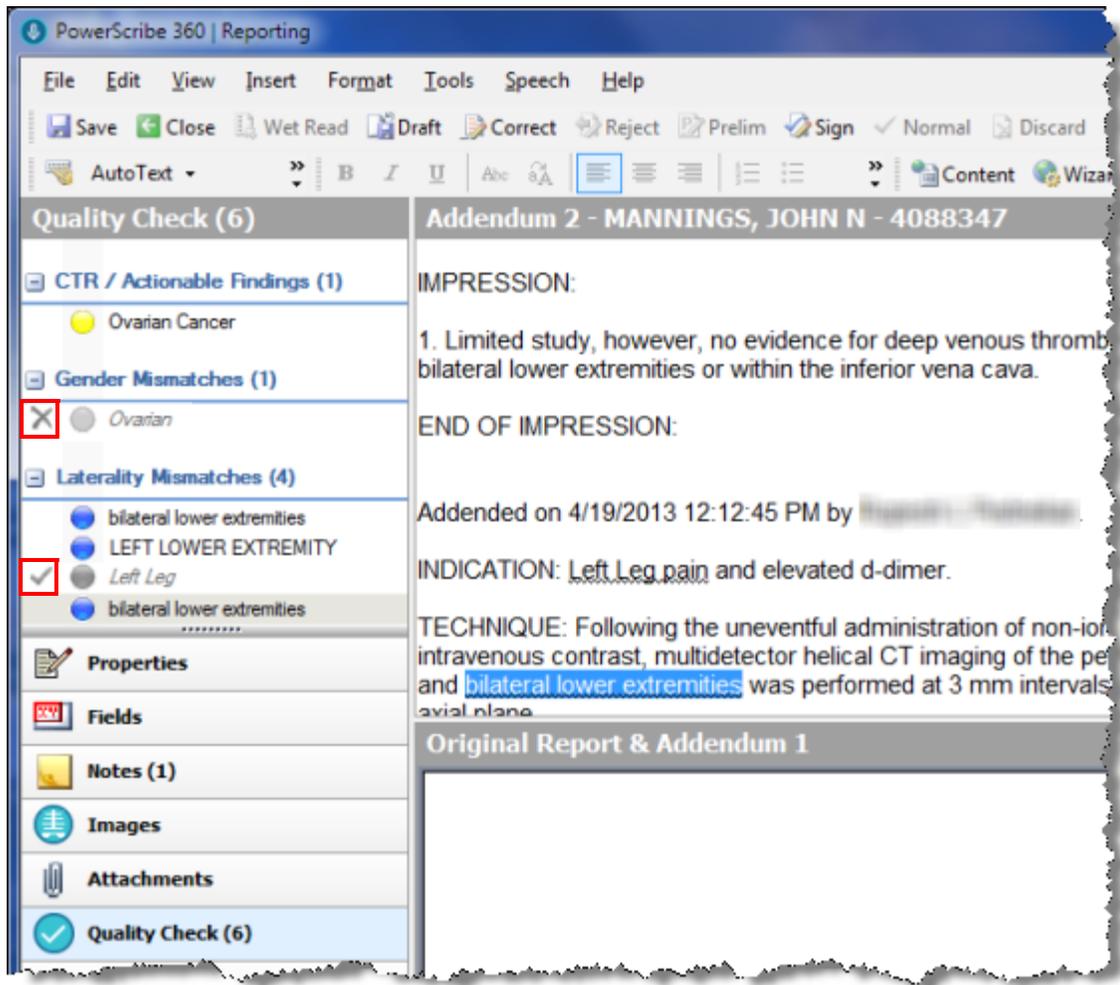


- Discrepancies are highlighted in the report body (see **Left Leg** in the example below).
- The discrepancies also appear in the **Quality Check** tab located in the left navigation panel of the Report Editor window. They are displayed by the type of inconsistency (critical test results, gender mismatches, and laterality mismatches).



3. Select a discrepancy to edit by selecting the discrepancy from the **Quality Check** list in the left navigation panel, or using the voice commands “**Next Discrepancy**” or “**Previous Discrepancy**.”

4. You can either correct or ignore a discrepancy:
- If you correct a discrepancy, a check mark ✓ appears to the left of the item in the discrepancy list to indicate that it has been edited, and it is no longer highlighted in the report body. The laterality mismatch in the illustration below was corrected.
  - If you ignore a discrepancy, an ✕ appears to the left of the item in the discrepancy list to indicate that you chose to ignore this item. The gender mismatch in the illustration below was ignored.



5. If no discrepancies are found, a message box opens, informing you that no consistency errors were found.

- If no discrepancies are found when you run *Quality Check* **manually** (at any time), click **OK** and either continue dictating or sign your report.
- If no discrepancies are found when *Quality Check* is configured to run **automatically** (on signature), click **OK** to continue with the signature workflow.

