PATIENT'S REDIAGNOSIS LIFTS
DEATH SENTENCE

A patient diagnosed with stage-four lung cancer and given less than a year to live was relieved to have the correct diagnosis - treatable sarcoidosis. However, he was then concerned about how the misdiagnosis occurred in the first place, risking his health as he had gone along with a recommendation for chemotherapy.

"Medical errors will always occur and when they do you have to ‘fess up... We need to reduce the errors in serious critical diagnoses to an absolute minimum."

- Dr. Paul Billings, genetic expert

**Cause Mapping** is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

**Problem**
A patient misdiagnosed with stage-four lung cancer was arrested with cancer.

**Analysis**
On review of lab slides, patients were determined to have had cross-contamination at the lab.

**Solution**
Cross-contamination impact was minimised.

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**Basic Level Cause Map**

- **Effect**: Potential for unneeded treatment
- **Cause**: Patient's lab sample contaminated
- **Evidence**: DNA testing found tissue from two patients

**More Detailed Cause Map**

- **Patient Safety Goal Impacted**: Potential safety impact
- **Property/Equipment Goal Impacted**: Potential for unneeded treatment
- **Labor/Time Goal Impacted**: Patient referred for chemotherapy

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**Timeline**

- **Early 2013**: Patient undergoes CT scan; diagnosed with sarcoidosis
- **October 23, 2014**: Patient's medical records sent to another doctor for review
- **August 13, 2014**: Doctors at local hospital confirm diagnosis of cancer
- **September 16, 2014**: Hospital performs a second biopsy
- **October 3, 2014**: Patient told he has sarcoidosis

**Impact to the Goals**

- **Patient Safety**: Potential safety impact
- **Patient Services**: Patient misdiagnosed
- **Property/Equipment**: Potential for unneeded treatment
- **Labor/Time**: First time known: 70,000 tissue specimens biopsied at the lab every year

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**Solutions**

Once all the causes are determined, solutions can be determined that address the various causes. Because it's still not clear how the cross-contamination at the lab occurred, an investigation specifically addressing that issue should occur, looking in detail at the specimen handling procedures and adding improvements where necessary to reduce the risk of cross-contamination. (The risk is already very low; the lab has said that it generally handles 70,000 specimens a year and this is the first contamination issue known.)

Additionally, the method for reconsidering diagnoses based on additional testing from alternate providers must be examined. Though the initial misdiagnosis in this case, based on a lab sample that clearly showed the presence of cancer cells, is understandable enough, the ensuing delay in updating the diagnosis despite heavy pushback from the patient is not. Ideally the lessons learned from this case will provide safer and more effective healthcare for everyone.

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For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our website.