# Percutaneous Biopsy Procedures

**Descriptor:**

The success of imaging guided biopsy procedures.

**Background:**

The majority of percutaneous biopsy procedures are now performed under imaging guidance in the Department of Clinical Radiology. It is essential to check that specimens that are obtained are adequate for diagnosis and are representative of the lesion.

## The Cycle

**The standard:**

An adequate specimen from the biopsy site should be provided for histological/cytological assessment.

**Target:**

80-90% [5].

## Assess local practice

**Indicators:**

Percentage of specimens which are adequate and representative for histological/cytological diagnosis.

**Data items to be collected:**

1. The number of patients with adequate tissue samples, as decided by the pathologist

2. The number of patients with positive pathological results

3. The number of patients with a negative pathological result, benign result, or normal tissue, but an adequate specimen

Record for each patient:

   • The site or organ biopsied

   • The size of the lesion or organ

   • The type of lesion (focal, diffuse)

   • The imaging technique (CT, US, Fluoroscopy)

   • The biopsy technique (cutting needle, automated biopsy device, fine needle aspiration)

   • The type and size of needle used

   • The pathology result (definite diagnosis, normal tissue, inadequate specimen)

Any complications:

   • A coded identifier for the radiologist

**Suggested number:**

30 consecutive cases.

**Suggestions for change if target not met:**

• Present the results at an audit meeting and discuss the possible reasons for failure to meet the standards

• Consider changing the size of needle used, or the number of biopsies taken at each procedure

• Consider using a mechanical biopsy technique as routine

• Record the position of the needle with hard copy to check the accuracy

• Introduce a biopsy register to encourage follow-up

• Discuss biopsies in your MDT meetings

• Arrange a training visit to a department with better results

**Resources:**

• Ongoing data recording

• Secretarial

• Radiologist (6–12 hours)

**References:**

1. Bernadino ME. Percutaneous biopsy. AJR 1984;142:41–5.
2. Burbank F et al. Image guided automated core biopsies of the breast, chest, abdomen and pelvis. Radiology 1994;191:165–71.
3. Moulton JS, Moore PT. Coaxial percutaneous biopsy technique with automated biopsy devices: value in improving accuracy and negative predictive value. Radiology 1993;186:515.
4. Labadie M, Liaras A. Percutaneous biopsy: cytology. In: Dondelinger et al., eds. Interventional Radiology. New York: Thieme Medical Publishers, 1990:2–8.
5. Society of Interventional Radiology. Topic: Image-Guided Percutaneous Needle Biopsy 2004. <http://www.sirweb.org/medical-professionals/GR_PDFs/nb.pdf> (Accessed 19.9.16)

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Taken from Clinical Audit in Radiology 100+ recipes RCR 1996, updated by D Remedios & Jozsef Illes

**Published Date:**

Monday 7 January 2008

**Last Reviewed:**

Friday 18 January 2019