Demographics of interventional radiology (IR) guided biopsies in a community hospital

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Background

The purpose of this research project was to look at the distribution of biopsies being completed in a community hospital while patients are hospitalized as inpatients. This is important because inpatient biopsies can result in increased adverse events for the patient, increased lengths of stay, and decreased costs paid to the hospital (outpatient biopsies are more cost effective for the hospital). In the future, we would like to look at whether it is necessary for biopsies to be completed as an inpatient versus outpatient.

Methods

A chart review of data from 51 patients ranging in age from 30 to 89 years old who underwent IR-guided biopsies over a 5-month period from March 1st 2019 to July 20th 2019 was completed. There were 22 female patients and 29 male patients. Out of the 51 patients, 2 of the patients underwent 2 different IR-guided biopsies during the same hospital admission.

Results

It was determined that all 51 biopsies yielded a diagnosis (malignancy or other), identified tumor histology, or confirmed presence of metastases for staging. New malignancy or metastases was diagnosed in 39 patients. There were 12 patients who underwent biopsies that confirmed diagnoses not consistent with malignancy. For example, one patient had a renal biopsy, which confirmed a diagnosis of Granulomatosis with Polyangiitis. The most common biopsies completed were lung (24%) and liver biopsies (28%). There were 2 patients who suffered a pneumothorax as a result of their lung biopsy. Additionally, we looked at whether a patient's biopsy was delayed (more than 2 days from when the biopsy order was placed). Of the patients, 14 had a biopsy that was delayed by 2 days. However, 40 of the patients did not have delayed biopsies. The lengths of stay for the patients ranged from 2 days to 34 days. Only 6 of these patients had lengths of stay less than 5 days.

Key Results:

Most common biopsies

- Lung Biopsy 24%
- Liver Biopsy 28%

Adverse events

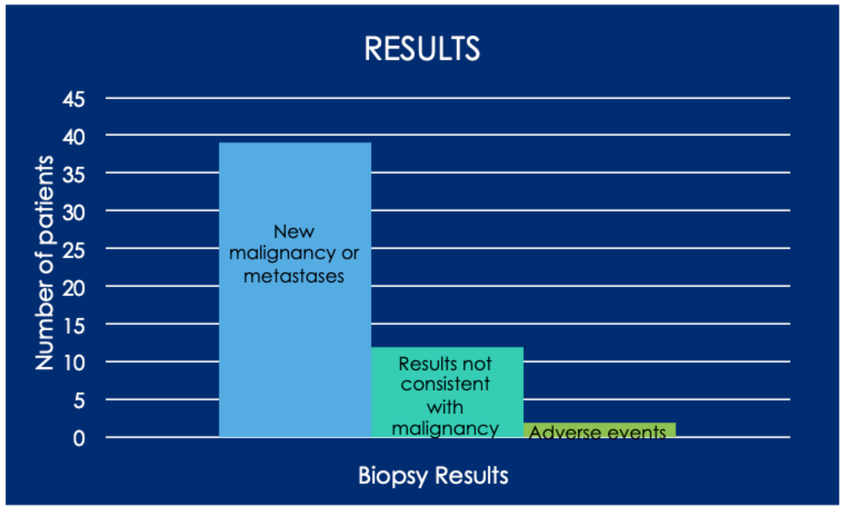
- 2 patients suffered a pneumothorax as a result of their lung biopsy

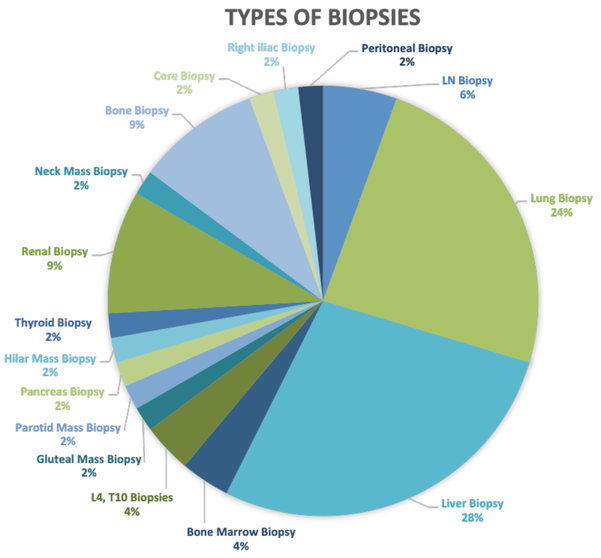
Delayed biopsies

- 14 patients had biopsies that were completed more than 2 days from when the biopsy order was placed

Lengths of Stay

- Ranged from 2 to 34 days
- Only 6 patients had lengths of stay less than 5 days





Diagnoses not consistent with malignancy

- Acute respiratory failure secondary to a COPD exacerbation and pneumonia
- Pulmonary embolism, DVT, and abdominal lymphadenopathy
- Self-limited rectal bleed, hypercalcemia
- Autoimmune hepatitis
- Diffuse global glomerulosclerosis with mesangial sclerosing glomerulopathy
- Minimal change disease
- Papillary cystadenoma lymphomatosum (Warthin's tumor)
- Sepsis from chronic right sacroiliac joint osteomyelitis
- Focal segmental sclerosing glomerulopathy
- Diabetic glomerulosclerosis
- Granulomatosis with polyangiitis
- Pneumonitis

Conclusions

Our project aim was to look at the distribution of various biopsies being completed in the inpatient setting. The most common biopsies completed were lung and liver biopsies. Two biopsies resulted in adverse outcomes for the patients. We would like to complete a future study in order to determine whether or not these biopsies can be completed as an outpatient in order to decrease lengths of stay and increase costs paid to the hospital.