**Objectives**

We sought to perform fine needle aspiration (FNA) cytology on surgical specimens at the time of tissue banking with two aims:
1. To develop expertise in aspiration and smear technique for Anatomical Pathology (AP) Registrars in training.
2. To develop a file of glass slides as a reference for teaching purposes.

**Methods**

AP Registrars performed aspirates on specimens received for tissue banking in the AP Department, with a 25 or 23g needle, in most cases using suction. Registrars not previously exposed to FNA and smear technique were initially trained with a PowerPoint presentation and one practical session. Paired air dried and alcohol fixed slides were prepared for each case and stained with DiffQuik and Papanicolaou. Aspiration was not performed if it was considered to interfere with subsequent histological assessment.

**Results**

Slides were prepared from 106 cases over 4.3 years, commencing in 2013. Aspirated material was predominantly from tumours, and less commonly from normal tissue. Specimen type was diverse and included, in decreasing frequency: colon, breast, liver, kidney, prostate, bladder, lung, pancreas, endometrium, lymph nodes, testis, thyroid, with less common sites including soft tissue, adrenal, thymus, omentum, ovary and retroperitoneum. The specimen types reflect surgical specimens received for tissue banking. No artefact related to the FNA was noted on the subsequent histology.

**Experience in aspiration and smear technique:**

Registrars in AP each had the opportunity to perform FNA on specimens received for tissue banking. The majority of registrars had not had prior experience performing FNA on patients. These registrars attended a practical session, aspirating bananas and smearing the material. Smear technique was taught by a cytology scientist with expertise in this area. Technique relating to aspiration, application of suction and movement of the needle within the specimen is similar to performing FNA on patients. Significant differences relate to the patient interaction, including obtaining consent, positioning, sterile preparation of the skin, potential for difficult access, and aftercare such as pressure on the aspiration site. Whilst acknowledging the limitations, performing the FNA on tissue banked specimens was considered of assistance for AP registrars attaining skills required for FNA on patients.

**File of glass slides for teaching reference:**

Increased image guided and endoscopic techniques have led to increasingly diverse specimen sites aspirated for cytological assessment, adding to the complexity of cytological diagnosis. Glass slides from common and uncommon tumours, as well as normal tissue from a diverse range of organ types were collected in this study. Cytology could be directly correlated with concurrent histology.

**Conclusion**

AP Registrars in training gained expertise in aspiration and smear technique which was considered of assistance in attaining skills required for subsequently performing FNA on patients. A library of cytology glass slides from surgical specimens, with histological correlation, has been developed as a reference and teaching resource.