Ovarian Transposition

Ionizing radiation used in adjuvant management of malignancy can have an adverse effect on gonadal function at all ages. The ovaries are exposed to significant doses of irradiation when radiotherapy is used to manage pelvic and abdominal malignant diseases such as Hodgkin's lymphoma, cervical and rectal cancer to children before childbearing age. Half of the follicles are lost when a dose of 4 Gy is used. The risk of premature ovarian failure increases significantly with increasing doses of abdominal pelvic irradiation. Ovarian transposition or repositioning the ovaries out of the irradiation field can preserve ovarian function before pelvic irradiation. Ovarian transposition can be done laparoscopically prior to pelvic irradiation. The procedure can reduce damage caused by radiotherapy but does not protect against damage caused by systemic chemotherapy. The laparoscopic procedure for ovarian transposition is highly efficient, can be done as outpatient and is associated with few postoperative complications. Proper location to fix the transposed ovaries depends on the planned irradiation field. For cervical cancer the ovaries are transposed high and lateral above the pelvic rim, while for pelvic lymph node irradiation they are placed medially or preferably laterally. Surgical complications reported include injury to the ovarian vasculature, fallopian tube infarction and ovarian cyst formation.

References:
Adrenal Cysts

Adrenal cysts are rare, usually found incidentally during autopsy series. Adrenal cysts are usually asymptomatic; mostly an occasional discovery during ultrasound or CT done for other reason. Acute abdominal or flank pain may be presented in some cases. From the histological point of view adrenal cysts are vascular or endothelial, hemorrhagic or pseudocyst and epithelial-lined or “true” adrenal cysts. Less than 10% of adrenal cysts are malignant. The most common types are epithelial and pseudocysts. Intra-cystic hemorrhage spontaneously or post-traumatic may be present. Due to the asymptomatic nature of the cyst they can attain large sizes usually in the range of 10 cm when diagnosed. Preoperative CT-guided aspiration for cytology and biopsy are useful technique to establish a diagnosis. Resection of the cyst should be performed for cysts larger than 3 cm, symptomatic, suspicion of malignancy, hormonally active or rapidly enlarging. Either laparoscopic or open are standard methods to remove the cyst along with the adrenal gland associated. Laparoscopic adrenalectomy or cyst unroofing is a safe and effective treatment for benign adrenal cysts with the advantages of a shorter hospital stay, less blood loss and enhanced cosmesis.

References:

Measuring IAP

The abdominal compartment syndrome (ACS) is a clinical syndrome caused by persistency elevated intraabdominal pressure (IAP) leading to decreased venous return and cardiac output, increase intracranial pressure, impaired ventilation, and kidney and bowel end-organ damage. The most common etiologies of ACS in children are isolated head trauma, abdominal trauma, surgery for abdominal wall defect, bowel ischemia/necrosis and meningococcemia. The most accurate method for measurement of IAP is directly via an intraperitoneal catheter. Due to invasiveness, the indirect method of measuring IAP using the intravesical method has prevailed as the gold standard. The bladder technique requires that the bladder be infused with a certain amount of saline, to ensure that there is a conductive fluid column between the bladder and the transducer. The method uses a Foley catheter inserted into the bladder while the bladder is filled with saline. The closest correlation with intraabdominal pressure occurs when a volume of 1 ml/kg of weight is utilized in children. The higher the bladder
filling volume, the higher the overestimation of IAP. Optimal patient position for IAP measurement is supine, taken at end-expiration with the transducer calibrated to the level of the mid-axillary line. Infusion of saline at room temperature causes higher bladder pressure due to contraction of the detrusor bladder muscle. Mean IAP in critically ill children is 7 +/- 3 mm Hg. Above 12 mm Hg IAP is elevated.

References: