

Obstetrics & Gynecology (OB\GYN) Outline

Anatomy and Physiology 25%
<i>Normal Anatomy and Physiology</i>
GYN
Assess both adnexa (i.e., ovaries, fallopian tubes)
Assess the endometrium
Assess the uterus (i.e., position, orientation, contour)
Assess the cervix
Assess the cul-de-sacs
Assess patients of reproductive age
Assess postmenopausal patients
Assess premenarcheal patients
OB
Identify structures in the first trimester obstetrical exam at less than 10 weeks (i.e., decidual reaction, gestational sac, yolk sac, embryo)
Identify fetal anatomy in the first trimester obstetrical exam at 10-14 weeks (i.e., calvarium, stomach, cord insertion, extremities)
Identify multiple gestations (i.e., fetal number, chorionicity/amnionicity)
Assess the placenta (i.e., size, location)
Assess the umbilical cord (i.e., insertion into placenta, vessel number)
Assess amniotic fluid volume
Assess fetal lie and presentation
Assess the fetal heart (i.e., axis, chambers, outflow tracts)
Assess the neck
Assess intracranial structures
Assess the facial anatomy (i.e., nose, lips, nasal bones, orbits, profile)
Assess the diaphragm
Assess the thorax (i.e., thymus, lungs)
Assess the abdomen (i.e., gallbladder, stomach, liver)
Assess the skeletal system (e.g., cranial contour, long bones evaluation, ribs, vertebrae, skull, spine)
Assess the ankles and feet
Assess the hands/fingers
Assess the genitalia
Pathology 41%
<i>Abnormal Physiology and Perfusion</i>
GYN
Identify adnexal pathology other than ovarian
Identify ovarian pathology
Identify endometrial pathology (i.e., polyps, hyperplasia)
Identify uterine masses (e.g., leiomyomas, sarcomas)
Identify Müllerian duct developmental anomalies (e.g., septated, subseptate, bicornuate, unicornis uterus)
Identify adenomyosis
Identify cervical pathology (e.g., polyps)
Identify free fluid in the pelvis
Identify vaginal pathology (e.g., imperforated hymen)
OB
Identify maternal pelvic pathology
<i>Congenital Anomalies</i>
Assess multiple gestations (e.g., conjoined twins, acardiac twin, twin to twin transfusion syndrome, discordance)
Identify abnormal multiple gestations
Identify molar degeneration
Identify ectopic pregnancy
Identify embryonic/fetal demise
Identify anembryonic pregnancy
Identify abnormal trisomy (e.g., 13, 18, 21)
Identify abnormal congenital anomalies
Identify abnormal amniotic fluid volume
Identify abnormal fetal growth
Identify abnormal yolk sac
Identify abnormal central nervous system anomaly (e.g., anencephaly, acrania, hydranencephaly, Dandy-Walker malformation, encephalocele)
Identify abnormal intracranial structures (e.g., choroid plexus cyst)
Identify a thickened nuchal translucency
Identify abnormal face (i.e., nose/ lips, orbits, profile)
Identify abnormal neck (e.g., goiter, cystic hygroma)
Identify abnormal fetal heart (e.g., axis, chambers, outflow tracts)
Identify abnormal diaphragm

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Identify abnormal thorax	
Identify abnormal abdomen (e.g., gallbladder, stomach, liver)	
Identify abnormal abdominal wall defect (e.g., omphalocele, gastroschisis)	
Identify abnormal umbilical cord (e.g., insertion, vessels)	
Identify abnormal gastrointestinal system (e.g., echogenic bowel, duodenal atresia, bowel obstruction, esophageal atresia, cysts)	
Identify abnormal genitourinary system (e.g., hydronephrosis, cystic renal dysplasia, hydroureter, renal agenesis, bladder outlet obstruction, ureterocele, abnormal genitalia, ovarian cyst)	
Identify abnormal genitalia	
Identify abnormal skeletal system (e.g., skull, spine)	
Identify abnormal ankles and feet (e.g., club feet, polydactyly)	
Identify abnormal hands/fingers	
Placental Abnormalities	
Identify previa	
Identify vasa previa	
Identify subchorionic hemorrhage	
Identify abruption	
Identify accreta, increta, percreta	
Identify infarction	
Identify abnormal membrane/insertion shape (i.e., circumvallate)	
Identify accessory lobe	
Identify masses (e.g., chorioangioma)	
Protocols	25%
Clinical Standards and Guidelines	
Obtain pertinent clinical history as a part of the exam	
Correlate previous exams	
Review lab results as a part of the exam (e.g., hCG levels, CA 125)	
Perform quality assurance checks on the equipment	
Perform transabdominal technique	
Perform transvaginal technique	
Perform translabial technique	
Measurement Techniques	
GYN	
Measure endometrium thickness	
Measure ovarian dimensions	
Measure uterine dimensions	
Measure cervical length	
OB	
Perform biophysical profiles	
Measure amniotic fluid (i.e., amniotic fluid index, deepest pocket)	
Measure crown rump length	
Measure mean sac diameter	
Measure the yolk sac	
Measure biparietal diameter	
Measure biparietal diameter corrected	
Measure head circumference	
Measure cisterna magnum	
Measure cerebellum	
Measure transverse cerebellar diameter	
Measure cerebral lateral ventricle	
Measure cephalic index	
Measure nuchal translucency in first trimester	
Measure nuchal fold between 15 and 20 weeks' gestation	
Measure orbital, intraorbital and outer orbital diameters	
Measure nasal bone	
Measure abdomen circumference	
Measure humerus length	
Measure femur length	
Measure other long bones (e.g., radius, ulna, tibia)	
Physics and Instrumentation	8%
Hemodynamics	
GYN	
Assess ovarian vasculature with Doppler	
Assess the uterine arteries with Doppler	
Assess arteriovenous malformations using Doppler	
OB	

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Assess embryonic and/or fetal heart rate and rhythm with M-mode	
Assess the middle cerebral artery with Doppler	
Assess the ductus venosus	
Assess fetal heart rate using Doppler	
Assess the umbilical cord vessels with Doppler	
Imaging Instruments	
Apply M-mode	
Apply color flow imaging	
Apply power (angio, amplitude) Doppler	
Apply pulsed spectral Doppler	
Apply harmonics	
Perform 3-D imaging	
Apply knowledge of artifacts	
Treatment	1%
Sonographer Role in Procedures	
Provide guidance for sonohysterography	
Provide guidance for amniocentesis after 15 weeks	
Provide guidance for chorionic villus sampling	

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