

## Elective AP CC Exam Module Study Guide

Only look at the tables which correspond to the modules you registered to take.

CC AP – General Anatomic Pathology	
• anaplastic large cell lymphoma	• Kaposi sarcoma
• benign melanocytic lesions	• malakoplakia
• biliary tract diseases	• medulloblastoma
• breast; adenosis	• meningitis
• breast; benign/reactive/hormonal changes	• mesonephric rest
• breast; ductal hyperplasia	• non-infectious colitis
• breast; lobular carcinoma	• pancreas; malignant neoplasms
• breast; radial scar	• pancreatic endocrine neoplasms
• breast; stromal lesions	• prostatic intraepithelial neoplasia
• endometrial sarcomas	• refractory anemia
• esophagitis	• renal cell carcinoma subtypes
• gastritis	• salivary gland neoplasms
• giardiasis	• thymoma
• interstitial lung diseases	

CC AP – Surgical Pathology I	
• breast; fibrocystic changes	• red cell aplasia
• breast; ductal carcinoma in situ	• renal cell carcinomas; syndromes
• carcinomas; lung	• rhabdomyosarcoma
• collagenous colitis	• skin, cysts
• Cryptococcus	• solitary fibrous tumor
• endometrial hyperplasia	• testis; hematolymphoproliferative disorders
• epididymal tumors	• thymoma
• fibroadenoma vs. phyllodes tumor	• ovary; metastatic carcinoma
• Gleason score	• urothelial carcinoma
• inflammatory bowel disease	• von Hippel Lindau syndrome; tumors
• meningioma	
• Paget disease of bone	

CC AP – Surgical Pathology II	
• adrenal neoplasms	• lung; infections; special stains
• angiolymphoid hyperplasia with eosinophilia	• oral cavity; mesenchymal tumors
• CNS; demyelinating diseases	• ovary; serous tumors
• CNS; gliomas	• parotid gland tumors
• endometriosis	• peripheral nerve sheath tumors
• follicular lymphoma	• primary sclerosing cholangitis
• Gardner syndrome	• salivary gland tumors
• GI; normal histology	• skin; vacuolar interphase dermatitis
• Gleason patterns	• small intestine; neuroendocrine tumors
• hemangioendothelioma	• testis; germ cell tumors
• hemangioma	• thyroid; papillary lesions
• lipomas	

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CC AP – Surgical Pathology III	
• bone lesions of the jaw	• paragangliomas
• breast – benign lesions mimicking cancer	• PEComas
• breast – fibrocystic changes	• prostate carcinoma
• breast – malignant neoplasms	• prostate – benign lesions mimicking cancer
• colitis	• prostate – normal anatomy & histology
• hepatitis – clinical lab findings	• pulmonary fungal infections
• HHV-8; lymphoproliferative disorders	• rhabdomyosarcoma
• Hodgkin disease – IHC	• soft-tissue sarcomas
• melanoma	• testicular tumors – clinical lab findings
• mesothelial tumors – benign	• testicular tumors – IHC
• mucosal prolapse syndrome	• twin gestation
• myometrial lesions – benign	• urinary bladder – benign lesions
• oral mucosa lesions	• vasculitides

CC AP – Cytopathology I – Gynecologic & Non-Gynecologic	
• adenocarcinoma; ascites	• LSIL
• Pneumocystis	• BAL
• benign mixed tumor/pleomorphic adenoma	• pancreatic cytology
• Bethesda system	• parotid gland FNA
• bile duct FNA cytology	• pelvic washings cytology
• Candida	• pulmonary fungal infections
• carcinoma; bronchial wash	• sputum adequacy
• cervical cancer screening guidelines	• squamous cell carcinoma; cervix
• cervicitis	• thyroid carcinoma
• cholangiocarcinoma	• thyroid nodule FNA
• CLIA; Pap test retention	• urine contamination
• hepatocellular carcinoma	• urine cytology; infectious agents
• HSIL	

CC AP – Cytopathology II – Gynecologic	
• adenocarcinoma in situ	• hyperkeratosis
• ancillary testing (HPV, p16, etc)	• infections
• artifacts	• LBCC; extrauterine malignancy
• ASCUS management	• LSIL management
• atrophy	• Pap; benign cells
• atypical glandular cells, management	• Pap; endometrial cells
• Bethesda system, adequacy	• Pap; NILM
• Candida, trichomonas	• Reactive / reparative changes
• cervical cancer screening guidelines	• specimen adequacy
• glycogen accumulation	• squamous carcinoma
• Herpesvirus	• untreated LSIL
• HSIL	• unsatisfactory for evaluation
• HSIL; management guidelines	

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CC AP – Cytopathology III - Non-Gynecologic	
• BAL; fungal infection	• pancreatic carcinoma
• cerebrospinal fluid; fungal infections	• pancreatic cystic neoplasms
• ciliocytophthoria	• pancreatic benign neoplasms
• delayed specimen processing; fixation	• pancreatic pseudocysts; fluid chemistries
• esophageal brushings	• parotid FNA; malignant neoplasms
• GI stromal tumor	• peritoneal washings; benign cells
• Head and neck FNA; benign cysts	• pleural fluid; malignant cells
• liver FNA; malignant neoplasms	• Pneumocystis
• lung adenocarcinoma; molecular testing	• thyroid FNA; benign
• lung FNA; benign neoplasms	• thyroid FNA; malignant neoplasms (2)
• lymph node FNA; lymphoid neoplasms	• urine casts
• melanoma	• urine; malignant neoplasms

CC AP – Bone/Soft Tissue	
• angiomyofibroblastoma	• malignant chondroid tumors
• arthritis	• malignant osteogenic tumors
• atypical fibroxanthoma; pleomorphic sarcoma	• malignant vascular tumors
• benign fibrous/myofibroblastic lesions	• metabolic disorders of bone
• benign osteogenic tumors	• osteomyelitis
• benign peripheral nerve sheath tumors	• paraganglioma
• bone infarct	• perivascular tumors
• connective tissue tumors	• reactive soft tissue lesions simulating sarcoma
• fibrous dysplasia	• rhabdomyosarcoma
• leiomyosarcoma	• small round cell tumors
• lipoma and variants	• synovial sarcoma
• liposarcoma	

CC AP – Breast I	
• adenomas	• inflammatory/reactive lesions
• adenosis	• invasive carcinoma
• atypical ductal hyperplasia	• invasive ductal carcinoma and variants
• atypical lobular hyperplasia	• mesenchymal tumors
• breast cancer prognosis	• papilloma
• columnar cell change	• pediatric breast cancers
• ductal carcinoma in situ	• radial scar; complex sclerosing lesion
• ductal hyperplasia	• therapy induced changes
• epithelial hyperplasias	• tubular carcinoma
• flat epithelial atypia	

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CC AP – Breast II	
• adenosis	• malignant mesenchymal tumors
• Bloom-Richardson grading	• mammographic abnormalities
• breast; inflammatory lesions	• microarray gene analysis
• collagenous spherulosis	• mixed epithelial and stromal tumors
• ductal carcinoma in situ	• nipple lesions
• epithelial hyperplasias	• papillary lesions
• Her-2/neu IHC	• physiological changes in normal breast
• infiltrating carcinoma	• pseudoangiomatous stromal hyperplasia
• infiltrating ductal carcinoma; variants	• radial scar
• inflammatory/reactive lesions	• therapy induced changes
• lobular carcinoma in situ	

CC AP – Breast III	
• adenoma	• gynecomastia
• adenosis variants	• inflammatory lesions
• atypical ductal lesions	• invasive ductal carcinoma & variants
• benign ductal lesions	• lumpectomy; adequate margins
• collagenous spherulosis	• metaplasias
• core biopsy findings requiring re-excision	• neuroendocrine differentiation in carcinoma
• detecting stromal invasions	• phyllodes tumors
• fibroadenomas	• risk of breast cancer
• fibrocystic changes	• sentinel lymph nodes
• flat epithelial atypia	• spindle cell metaplastic carcinoma
• grading of breast cancers	

CC AP – Cardiovascular	
• amyloid	• inflammatory cardiomyopathies
• cardiac catheterization complications	• ischemic heart disease
• cardiac tumors	• Kawasaki disease
• cardiac valvular lesions	• myocardial infarction
• Churg-Strauss angitis	• polyarteritis nodosa
• Dirofilaria	• renal artery stenosis
• endomyocardial biopsy; heart allograft	• rheumatic fever
• hypertensive cerebrovascular disease	• sarcoidosis
• hypertrophic cardiomyopathy	• vascular tumors of intermediate malignancy
• infectious vasculitis	• vasculitis
• infective endocarditis	

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CC AP – Dermatopathology I - Non-Neoplastic	
• alterations of dermal collagen (scar, keloid, scleroderma)	• panniculitis
• bullous and pustular diseases (pemphigus)	• pediculosis
• celiac disease	• psoriasiform dermatitis
• dermal fungal infections	• sentinel lymph nodes; normal histology
• dermatitis herpetiformis; subepidermal bullae	• spongiotic dermatitis
• diffuse dermal inflammation (Sweet syndrome, etc.)	• stasis dermatitis
• granulomatous dermatitis	• vacuolar interphase dermatitis
• herpes	• vacuolar interphase dermatitis; IF
• hyperpigmentation	• vasculitis
• Langerhans cells	• viral infections
• lichenoid dermatitis	

CC AP – Dermatopathology II - Neoplastic	
• atypical fibroxanthoma	• malignant vascular tumors
• benign adnexal tumors	• melanoma
• benign epidermal tumors	• melanoma in situ
• benign vascular tumors	• melanoma; variants
• Breslow measurement	• metastatic carcinomas
• cutaneous leukemia	• metastatic melanoma; targeted therapy
• dermal melanocytic lesions	• neuroendocrine carcinoma
• dermatofibroma	• premalignant epidermal tumors
• histiocytic tumors	• sebaceous adenoma
• malignant soft tissue tumors	• vascular tumors of intermediate malignancy

CC AP – Endocrine	
• adrenal hypofunction; infections	• pituitary adenoma
• adrenal metastatic carcinoma	• pituitary histology
• adrenocortical adenoma	• thyroid anaplastic carcinoma
• adrenocortical carcinoma vs renal cell carcinoma	• thyroid FNA; false positive
• adrenocortical hyperplasia	• thyroid follicular adenoma
• BRAF V600E	• thyroid follicular carcinoma
• multiple endocrine neoplasia	• thyroid medullary carcinoma
• paraganglion	• thyroid nodule; gross sampling
• parathyroid anatomy and histology	• thyroid oncocytic carcinoma
• parathyroid carcinoma	• thyroid papillary carcinoma
• pheochromocytoma	

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CC AP – Gastrointestinal/Liver/Biliary I	
• anal neoplasms	• hepatobiliary neoplastic cysts
• biliary tract diseases	• hepatocellular carcinoma
• celiac disease	• immunodeficiency
• colitis; drugs	• intestinal parasites
• esophagus; benign lesions	• microsatellite-unstable colon cancers; IHC
• esophagus; infections	• pancreatic neuroendocrine tumors
• esophagus; mesenchymal tumors	• pre-neoplastic lesions of esophagus
• esophagus; metaplasia	• primary biliary cirrhosis
• esophagus; pre-cancerous lesions	• regenerative nodule vs hepatocellular carcinoma
• gastric carcinoma	• sarcomas
• gastrinomas	• small intestines; infections
• GI tract lymphomas	• small intestines; adenomas
• Helicobacter gastritis	

CC AP – Gastrointestinal/Liver/Biliary II	
• anal intraepithelial neoplasia	• mesenchymal tumors of GI tract
• benign liver masses	• metastatic carcinoma; IHC
• colitis	• neuroendocrine tumors of GI tract
• colorectal polyps	• pancreatic adenoma
• diverticular disease	• pancreatic carcinoma
• esophagitis	• pancreatic cystic neoplasms
• esophagus; benign tumors	• pancreatic neuroendocrine tumors
• familial colorectal cancer syndromes	• preneoplastic lesions of esophagus
• gastritis	• reactive gastropathy
• Hepatocellular carcinoma; Hepatitis C; cirrhosis	• small intestines; non-neoplastic disorders
• hepatocellular carcinoma; IHC	• Wilson disease
• liver; vascular disorders/tumors	

CC AP – Gastrointestinal/Liver/Biliary III	
• adenomatous colon polyps and cancer	• liver – normal anatomy and histology
• amyloidosis	• liver – viral infections
• colitis	• Lynch syndrome
• esophagitis	• mesenteric lymphadenitis
• gastritis	• parasitic infections – liver
• Helicobacter gastritis	• parasitic infections – small bowel
• hepatitis	• small bowel obstruction – causes
• intestinal polyps and pseudopolyps	• viral infections of the GI tract
• liver transplantation	• Whipple procedure
• liver – granulomas	

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CC AP – Genitourinary I	
• Gleason grading	• renal cell carcinoma
• Gleason score	• renal cell carcinoma; subtypes
• mimickers of prostate cancer	• renal papillae lesions
• nephrosclerosis	• renal tumors; benign
• pediatric renal tumors	• spermatocytic seminoma
• polyomavirus	• testicular biopsy for infertility
• prostate adenocarcinoma	• testicular germ cell tumors
• prostate; IHC	• urinary bladder; non-neoplastic lesions
• prostate; normal histology	• urinary bladder; reactive changes
• pyelonephritis	• urothelial carcinoma
• renal allograft rejection	• urothelial papillomas

CC AP – Genitourinary II	
• acute tubular necrosis	• prostate; normal histology
• adult renal tumors	• prostate; reactive changes
• angiomyxoma	• prostatectomy specimens; incidental findings
• germ cell tumors	• pyelonephritis
• infertility	• renal neoplasms; genetic syndromes
• lysosomal storage diseases; Fanconi syndrome	• sex cord stromal tumors
• mesonephric rests and hyperplasia	• urinary bladder; neoplasms, benign and malignant
• neuroendocrine carcinoma	• urinary bladder; non-neoplastic lesions
• pediatric renal tumors	• urothelial carcinoma; variants
• penis; neoplastic and non-neoplastic	• urothelial tract; inflammatory and reactive lesions
• prostate carcinoma	

CC AP – GYN/Placenta I	
• adenocarcinoma of cervix	• fetal membrane and disc abnormalities
• atypical endometrial hyperplasia	• multiple pregnancy placenta
• cervical metaplasia	• myometrial soft tissue tumors
• cervix histology	• ovarian germ cell tumors
• endocervical biopsy; benign/reactive changes	• ovary; metastatic carcinoma
• endometrial carcinoma; subtypes	• ovary; small cell carcinoma
• endometrial carcinosarcoma	• serous tumors of ovary
• endometrium; hyperplasias	• squamous intraepithelial lesions
• endometrium; iatrogenic patterns	• villitis and intervillitis; infectious
• endometrium; metaplasias	• vulvar soft tissue tumors
• endometrium; normal patterns	

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CC AP – GYN/Placenta II	
• adenoid basal carcinoma	• germ cell tumors
• BRCA-1 mutations; GYN tumors	• maternal hypertension; placental findings
• carcinomas metastatic to ovaries	• mesonephric rests
• disseminated peritoneal leiomyomatosis	• molar pregnancy
• endocervical adenocarcinoma	• ovarian mucinous tumors; survival
• endometrial adenocarcinoma	• ovarian serous tumors; mutations
• endometrial hyperplasia	• PAX-8
• endometrial metaplasia	• Peutz-Jeghers syndrome; ovarian neoplasms
• endometrial polyps	• peritoneal inclusion cysts
• endometrioid carcinoma; FIGO grading	• polycystic ovaries
• endometritis	• umbilical cord; infections
• fallopian tubes; inflammatory/infectious disorders	• uterine smooth muscle tumors

CC AP – GYN/Placenta III	
• cervical intraepithelial neoplasia	• fallopian tube neoplasms
• cervical lesions – benign	• fallopian tubes; <i>BRCA1</i> mutations
• eclampsia and atherosclerosis	• lichen scleroses
• endometrial hyperplasia	• ovarian germ cell tumors
• endometrial metaplasias	• ovarian surface epithelial tumors
• endometrial stromal nodule	• ovarian teratomas; grading
• endometrial stromal sarcoma	• ovary; metastatic tumors
• endometritis	• ovary; surface epithelial-stromal tumors
• endometrium; iatrogenic patterns	• papillary tumors of the peritoneum
• endometrium; neoplastic	• twin gestation
• endometrium; non-neoplastic	• uterine smooth muscle tumors; metastases

CC AP – Head & Neck	
• adipose tumors	• normal oral histology
• bone infarct	• nose and sinuses; fungal infections
• branchial cleft cyst	• odontogenic cysts
• ectopic thyroid	• odontogenic neoplasms
• granular cell tumor	• phycomycosis
• Kimura disease	• pleomorphic adenoma
• larynx; benign neoplasms	• radiation effect
• larynx; squamous dysplasia; carcinoma	• salivary gland tumors; malignant
• lymphoepithelial cysts	• salivary gland; benign neoplasms
• metabolic disorders of bone; hyperparathyroidism	• thyroid; medullary carcinoma
• nasopharyngeal carcinoma	• Warthin tumor
• non-neoplastic lesions; oral cavity	



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CC AP – Medical Renal I	
• acute diffuse proliferative GN	• membranous GN
• AIDS nephropathy	• minimal change nephrotic syndrome
• Alport syndrome	• monoclonal gammopathy associated renal diseases
• amyloidosis	• obstructive kidney disease
• ANCA disease	• polyoma virus
• cryoglobulinemic GN	• proliferative glomerulonephritis
• dense deposit disease	• pyelonephritis
• diffuse extracapillary proliferative GN	• renal allograft rejection
• focal segmental glomerular sclerosis	• serum complement in renal diseases
• Goodpasture syndrome	• thrombotic microangiopathy
• Henoch-Schönlein purpura	• Wegener granulomatosis
• membranoproliferative GN	

CC AP – Medical Renal II	
• acute diffuse intracapillary proliferative GN	• IgA nephropathy
• adult polycystic kidney disease	• lupus nephropathies
• Alport syndrome	• membranoproliferative GN
• amyloidosis	• minimal change nephrotic syndrome
• anti-GBM nephritis	• nephrotic syndrome with hematuria
• arterial and arteriolar nephrosclerosis	• paraneoplastic syndrome
• developmental/congenital lesions	• renal allograft rejection
• Fabry disease	• renal infarction
• fibrillary GN	• renal transplant rejection; IHC
• HIV-associated nephropathy	• thrombotic microangiopathy
• hydronephrosis	

CC AP – Molecular Pathology	
• alveolar rhabdomyosarcoma	• <i>KRAS</i> point mutation detection
• <i>BRCA1</i> mutations; cancer risk	• lung adenocarcinoma; mutations
• clear cell sarcoma	• lung cancer; FISH
• CML; Gleevec	• Lynch syndrome
• colon cancer; microsatellite instability	• neuroblastoma
• dot-blot hybridization; amplification	• neurocutaneous syndromes
• false negative results; paraffin embedded tissue	• polyposis syndromes
• FISH interpretation	• prostate cancer
• gel electrophoresis; sample degradation; QC	• quality control; sample contamination
• high grade embryonal tumor	• renal carcinomas
• hyperplasia vs lymphoma	• thyroid carcinomas

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CC AP – Pulmonary-Mediastinal	
• adenocarcinoma	• mesothelioma; IHC
• bronchiectasis	• mycobacterial infections
• carcinoid tumor	• organizing pneumonia
• clear cell (sugar) tumor	• parasitic infections
• fungal infections; special stains	• PEComa
• hamartoma	• pleura; benign neoplasms
• hemangioendothelioma	• pulmonary hypertension
• hypersensitivity pneumonitis	• respiratory bronchiolitis
• interstitial pneumonias	• sarcoid
• IV drug abuse	• small cell carcinoma
• lipid pneumonia	• solitary fibrous tumor
• lung; benign/non-neoplastic	• thymoma

CC AP – Transplant Pathology	
• chronic rejection; histology	• passenger lymphocyte syndrome
• graft derived ABO antibodies	• post-transplant viral infection
• graft-versus-host disease	• post-transplant; pulmonary infections
• GVHD; liver	• renal transplant; infections
• GVHD; skin	• second renal allograft rejection
• HLA system; inheritance	• transplant glomerulopathy
• hyperacute rejection	• types of transplanted tissues