Patient Navigation & The Impact on Healthcare – Harold P Freeman, MD

The #1 cause of bankruptcy in America is failure to pay medical bills. President Nixon waged the War on Cancer in 1971. At that time cancer was presumed to be a single disease. In 2005 President George W Bush inacted the Patient Navigation Outreach & Chronic Disease Prevention Act of 2005 (PL 109-18). On March 23, 2010, President Obama signed the Patient Protection and Affordable Care Act (ACA). The Cancer Program Standards 2012, standard 3.1 addressed the Patient Navigation Process.

Novel Use of Cancer Registry Data – Vonetta Williams, PhD, MPH, CTR, Manager of Shared Services and Collaborative Data Services Care at Moffitt Cancer Center and Research Institute in Tampa, Florida. Moffitt Cancer Center has an annual caseload of 10,000. The purpose of the Information Shared Service (ISS) Department at Moffitt Cancer Center is to provide high-quality data to clinicians, researchers and administrators, both within and outside of Moffitt. All data/biospecimen requests are processed by a Data Concierge Team. A project management office facilities the data provisioning process. More complex data requests requiring novel linkages between data source systems are reviewed for quality by the Data Quality and Standards Department prior to release. Total Cancer Care is Moffitt’s comprehensive approach to cancer that enables researchers and care-givers to identify and meet all the needs of the patient and their family during the patient’s lifetime and for future generations. A major component of Total Cancer Care is Personalized Cancer Care. \_\_\_\_\_\*\*\*\*\*

Essentials of Integrative Oncology – Brian D Lawenda, MD

What is integrative oncology? Integrative oncology is aimed at preventing and managing side effects of cancer treatment and to make the body less conducive to cancer growth and increasing a sense of control and hope in the patient. Oncologists must be excellent in their specialty, however, most oncologists have minimal knowledge about nutrition, supplements, complementary therapies, stress reduction, exercise, motivational health coaching, etc. Cancer related fatigue can be treated with Ginseng. Study showed that 2,000 mg ginseng/day reduced fatigue by 50% compared with placebo. Nausea & vomiting can be reduced by combining acupuncture-point stimulation of all methods (needle, electrical acupuncture, acupressure) reduced the incidence of acute vomiting 18-26%. 1.5 g of ginger/day reduced nausea scores by 60% vs control. Cancer cachexia showed 69% of patients using 2.2 g of omega-3 supplements/day gained weight during chemotherapy while only 29% of control patients maintained weight, and most lost weight. A saffron extract proved as effective as Prozac with fewer side effects in treating depression. Curcumin given during radiation therapy lowered radiation dermatitis scores by 31% with 67% lower risk of moist desquamation. More information can be found at <http://integrativeoncology-essentials.com/> such as anticancer diet, functional lab testing, exercise, stress reduction, reducing toxic exposure, and risk assessment tools. Online teaching modules are available, all free of charge. The Environmental Work Group (EWG) is a nonprofit environmental research organization and a leading content provider for public interest groups and concerned citizens. Their work continues to focus on fix major program areas: toxics, food, agriculture, children’s health, energy and water. Their website is [www.ewg.org](http://www.ewg.org) .

Guidelines for Coding Radiation Therapy Treatments – Wilson Apollo, MS, CTR, RTT

Understanding radiation units – Activity (such as used in brachytherapy) is the number of times each second a radioactive material decays and releases radiation. Dose (Absorbed) is the amount of radiation energy absorbed into a given mass of tissue. Dose (Equivalent) measures the energy per unit mass times adjustments for the type of radiation involved (quality factor/radiation weighting factor) and the biological response in the tissue (a weighting factor). Equivalent dose converts into a measure of risk. Protons are very penetrating while electrons are not as penetrating. Treatment modalities used in RT & coding guidelines for RT treatments – IMRT allows the dose to vary across the target, depositing more dose in specific areas and reducing dose in other areas. Check codes 20-27, most times IMRT is coded to 20 or 24 when most should be coded to 31 or 32. If RT in billing records is coded to “complex plan” the IMRT should be coded to 31 or 32. If IMRT and beam energy are mentioned in the treatment summary, code to IMRT, 31. 3D-Conformal RT should be coded to 32. 3D-conformal RT is essentially the predecessor to IMRT. IMRT is more complex. If both IMRT and 3D-conformal RT mentioned, code to IMRT (31). Stereotactic body radiation therapy (SBRT) does not have its own code. It is the modality used in an SBRT plan that gets coded. SBRT is a form of stereotactic radiation surgery (SRS). If delivered with a linac accelerator, code to 42. Otherwise code 41, SRS, NOS. Volumetric-modulated arc therapy (VMAT) is a commercial name used by Eleckta for RT technique. It is similar to Varian’s RapidArc and Siemen’s Cone-Beam Therapy (CBT). The dose can be delivered faster than conventional fixed IMRT or Tomotherapy treatment. It is a form of IMRT. RapidArc-Varian (VMAT) is a type of volumetric arc therapy. Dynamic adaptive radiotherapy (DART) is an advanced form of IGRT-IMRT treatment, also referred to as 4D treatment. RT that should be coded to IMRT (31) include: VMAT, Tomotherapy, RapidArc, CTB, Simulated Integrated Boost (SIB-IMRT) and DART. The Gamma knife uses Cobalt-60 sources lined up in a circular array and is used for delivery of stereotactic radiation surgery treatment for brain lesions and is coded to 43. The Cyberknife is also a form of SRS delivered by a 6MV linac and is coded to 42, Linac Radiosurgery. Brachytherapy: HDR & LDR – High dose rate (HDR) is a dose > 12 Gy/hr. This approach is used with temporary implants (I-192). Low dose rate (LDR) dose rate is in the range of 0.4 to 2.0 Gy/hr. This approach is used in permanent isotopes being implanted (I-125), however, LDR sources can also be implanted temporarily. Selective Internal RT (SIRT) utilizes yttrium-90 microspheres for treatment of hepatocellular carcinoma. SIRT with the use of Sir Spheres (yttrium-90), or Theraspheres, is considered radioembolization and coded to Brachytherapy, NOS (50). Treatment summaries are not always complete information regarding RT. Don’t copy and paste just from the summary. Suggested texting: 11/13/12-1/15/13 @ (location): Prostate, 6 MVX/IMRT, 180 cGy x 43 fx = 7740 cGy, over 63 days. Radiation therapy coding questions may be emailed to [apollow@mac.com](mailto:apollow@mac.com)

NCRA Update – Leah Kiesow

All transition training will be available on CD and on-line for a fee. 2014 & 2015 NCRA Conference presentation will be posted on-line, free of charge. On-line case studies (15) and 9 informational abstracts are available free of charge. Quizzes for CE credits are available on-line for a fee. [www.ncra-usa.org](http://www.ncra-usa.org) 🡪 Education 🡪 Training on the Transition.

Staging in the Future – Asa Carter, MBA, CTR - Coc; Marty Madera, MA - AJCC; Peggy Adamo, RHIT, CTR - NCI-SEER; Mary Lewis, CTR - CDC-NPCR

CoC Perspective on Staging – Asa Carter: Historical Perspective given from 2004 staging requirements through 2009 working stage. Staging requirements were changed and CoC is using staging requirements addressed in FORDS.

AJCC Staging the Future – Martin Madera: April 15th the manuscript was sent to the publisher, October, 2016 AJCC 8th Edition will be published and January 1, 2017 is the effective date for the 8th edition. General staging rules were clarified with the cancer registrar in mind. AJCC will now turn attention to education development to include information through high level summaries of all changes for every disease site and disease specific education on the most common cancers. There will be free registrar education supported by CDC with live webinars, online self-guided learning resources and enduring materials. AJCC remains the definitive source for TNM education at cancerstaging.org and CAnswer Forum. Physician education will also be developed with special focus on medical schools and residents.

Staging the Future – Peggy Adamo: Decision was made by CDC and CoC to transition from CS to TNM and adopted by SEER to maintain consistent data collection in the US. SEER is working on collecting/evaluating biomarkers and prognostic factors. NCI SEER is preparing for upcoming changes with education and training planned for the coming years through SEER\*RSA, SEER TNM reliability study and SEER\*Educate.

Staging the Future – Mary Lewis, NPCR: NPCR staging requirements are changing to directly coded AJCC (clinical & pathologic TNM, stage group, surg/rad sequence, systemic/surg sequence, with necessary biomarkers & prognostic factors) and directly coded summary stage (required for all registries, all providers). Directly coded summary stage provides continuity across Nation and time and is easier to learn and collect. Benefits include no central registry database conversions for changes or new versions of stage, AJCC TNM is used by physicians, and should reduce the burden on cancer registrars. NPCR will be developing training materials and tools for collection of directly coded TNM and SSS plus necessary SSFs. CDC is working on an AJCC Curriculum for Registrars in cooperation with AJCC and working on site-specific training opportunities and providing workshops for the education & training coordinators in the central registries. For 2015 diagnoses, directly coded TNM clinical & pathological stage and directly coded summary stage and CS used for staging are required by CoC. For 2016 diagnoses, directly coded TNM clinical & pathological stage and directly coded summary stage are required for all facilities.

2016 in NAACCR v15 – FYI – Version v15 was written for 2015 cases, not 2016 so you will be getting CS edits which are erroneous. When upgrading to v16, those CS fields **MUST BE blank**!

Timing is the Key to AJCC TNM Staging – Donna Gress, RHIT, CTR

Staging classifications are points in time of patient’s care. Pathologists do not assign pathologic stage. For clinical classification, the patient is diagnosed, has a diagnostic workup including biopsies of primary site, nodes, distant mets – information needed to establish tumor burden and choose appropriate treatment plan. For pathologic classification, you use all information from the date of diagnosis until going for surgery including surgical treatment operative findings, pathology report, and includes imaging following and based on surgical findings. Post-therapy clinical classification (yc) is when patient finished systemic or radiation therapy which may be the only treatment or may be neoadjuvant treatment to be followed by surgery. It is an evaluation to assess response to treatment through physical examination and imaging. This information is needed to establish remaining tumor burden and choose next steps in the patient’s treatment. Post-therapy pathologic classification (yp) includes all information from y-clinical evaluation (physical exam & imaging), surgical treatment operative findings and pathology report. M category rules are different from T and N. It is critical to know if mets are microscopically confirmed. Clinical & pathologic classification M category options are cM0, cM1 and pM1. There is no pM0. Only one M category may be assigned. If diagnostic workup shows osteolytic lesions on bone scan and bone biopsy shows metastatic adenoca on path report, this is now a pM1 in the clinical M category. **Do NOT** assign cM1 for clinical stage.

X and Blank – Staging classifications are all or nothing. If criteria are met, stage must be assigned in all categories, T, N and M. If criteria are NOT met, nothing may be assigned. Staging is about the patient, it is not about coding information. X is used if criteria is met, stage is unassigned. You must use X if category information is unknown or if group cannot be assigned. You cannot leave some information blank. Blank is used if criteria is NOT met, stage is blank. (No surgery, no regional LNs removed = Blank). All categories are blank, stage group is blank. Cannot use X and Blank together. The rare exception is if staging criteria is met but registrar does not have the information. X would be misleading. Cannot use X as case does not meet the TX or NX criteria, this implies the physician did not know the information – leave field Blank. Partial staging information is not useful and the case cannot be used for data analysis. The T, N, and M are needed for data analysis. If case does not meet AJCC definition for X, then it must be Blank.

Documenting AJCC Stage in Registry Data Items – Use physician assigned stage, if physician stage is not given, registrar can assign stage. If physician assigned stage is not correct, registrar can correct the stage.

Changes for 2016 – Tis may be entered into clinical T data field, cN0 may be entered into pathologic data field for Tis only, pM allowed into clinical M data field and cM allowed into the pathologic M data field. Case example: Physician states tumor invades adjacent tissue – cT3. CT/PET demonstrates nodal involvement – cN2. Bone scan shows lytic lesions – cM1. Biopsy of iliac crest shows metastatic carcinoma – pM1. Prior to 2016, cT3 cN2 cM blank = Stage 4 and pT Blank, pN Blank, pM1 = stage 4. 2016 diagnosis date & later: cT3 cN2 pM1 = stage 4 and pT Blank, pN Blank, pM1 = stage 4.

CAnswer Forum – Answers should be posted within 5 working days. The Collaborative Stage section of the CAnswer Forum has been closed for questions.

Assigning AJCC TNM: Physicians vs Registrars & the SEER Reliability Study – Annie Noone, NCI

A 2014 study was performed on breast, colon, lung, ovary and prostate sites. Results for CS tumor size in lung cases was 74% exact match, 11% had a match within same T category, 7% discrepancy with size category and 7% discrepancy with known vs unknown. For breast cases, 80% had exact match, 7% had match within same T category, 11% had discrepancy with size category and 3% discrepancy with unknown vs known. With CS lymph nodes, colon had 32% discrepancy with exact value and ovary had a 21% discrepancy with exact value. Findings from the study: Reliability for staging data elements is moderate to poor for some elements and some sites – ovary is particularly challenging 🡪 focus on training; derived T, N, M which are used to derive stage group also have some discrepancies 🡪 more analysis will be done on discrepancies. Discussion – central registries conduct visual editing and consolidation, gives an opportunity for multiple sources of data/verification; software that provides access to path reports may allow for better editing. Availability of cancer staging information at time of registration (abstracting) was reviewed from the results of the 2014 TNM reliability study. Provider assigned stage was not available in general, less available for clinical stage, better availability for tumors with recommendation for surgical resection. Registrars cannot simply transcribe information from the medical records because clinical or pathologic TNM stage group most often not assigned by providers; multiple, slightly different stage categories across various source documents of the same medical record; inconsistencies between TNM and stage assigned across various source documents of the same medical record. Using provider assigned stage is unlikely to save significant time for registrars. Pathologic T and N had higher agreement than clinical T and N as a reflection that pathologic staging occurs later and uses more information. Consultation notes had higher agreement with consolidated answers, although consult notes may not be in the hospital record unless the hospital and physician on the same EMR. MX is not a valid value but was used in about 25% of pathology reports. Problems with T stage on pathology reports were mostly in the substages. Conclusion: Cancer registrars abstracting new cases need to assign stage using all available information in the medical record. Central registries often have no access to medical records, thus provider assigned codes are not available (unless documented in the text fields).

AJCC TNM Staging of Breast Cancer – Melissa Riddle, CTR

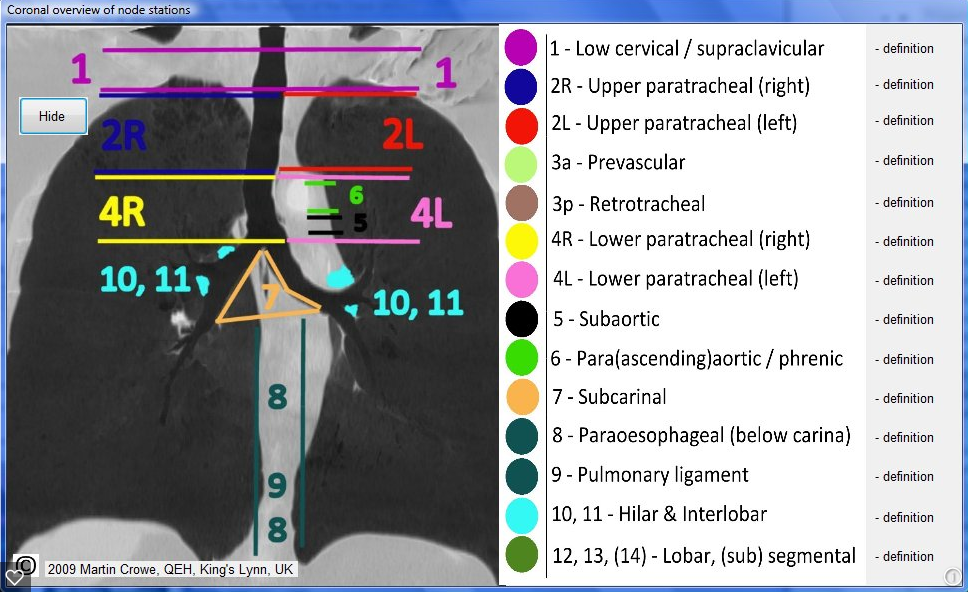
More than half of the female breast cancers are in the UOQ (C50.4) due to more glandular tissue in the UOQ. Birads over or equal to 4 on mammography is suspicious, however MD must state “suspicious for malignancy”. Internal mammary LNs are sternal, intramammary LNs are within the breast itself. Do not confuse these. Per FORDS: If 5 or more LNs removed, check operative report to determine if SLN excision or axillary dissection. Code the INTENT! Code SLN biopsy (2) even if SLNs failed to map and no lymphoid tissue found in specimen per path report. If surgeon sees positive margins at time of surgery and does not remove them you cannot “P” stage the cancer. You can have microscopically positive margins (seen on pathologist review of tissue) and “P” stage. Adjuvant RT Treatment – Radiation codes 18 (breast) and 19 (breast/LN) are if breast tissue is present. RT codes 20 (chest wall) and 21 (chest wall/LN) are if no breast tissue remains.

AJCC TNM Staging of Colon Cancer – Melissa Riddle, CTR

Colonoscopy with biopsy = cX, met the criteria, however, don’t know how far into the bowel wall the tumor invaded. T4b = through the entire bowel wall (serosa). Tumor deposits with no positive regional LNs = pN1c.

AJCC TNM Staging of Lung Cancer – Melissa Riddle, CTR

Lung nodal stations from tumourstager.com



No resection = pT, pN, pM all blank and stage group 99. If one is blank, they must all be blank.

You can take any diagnostic procedures, such as mediastinoscopy with LN biopsy/FNA, as clinical **AND** pathologic N.

If there is a site discrepancy between bronchoscopy, operative report and pathology report, use the operative report to determine primary site.

AJCC Staging of Pharynx & Larynx – Jayne Holubowsky

You need to understand the anatomy of the pharynx and larynx to properly stage. The pharynx is commonly referred to as the throat. There are 12 subsites of the oropharynx alone, not including the overlapping sites (.8) or the NOS (.9). Synonyms: posterior 3rd of the tongue = base or root of the tongue. Brachial cleft sinus tumors are a birth defect. Cancer of the brachial cleft are extremely rare. Actor Michael Douglas had stage 4 throat cancer in 2010 and was HPV positive. HPV positive oropharynx tumors respond better to treatment than HPV negative tumors. However, once they recur there is no difference in survival. HPV vaccine is available, 3 doses are required and is recommended for both females and males ages 12-26. When reviewing pathology reports, p16+ = HPV+. The conchi in the nasopharynx have one on each side, divided by the nasal septum, entrance from the nasal passage to the nasopharynx. When staging lymph node involvement, midline is considered ipsilateral. Laryngopharynx cancers are the most lethal. Risk factors include GERD. Symptoms include pain with swallowing with radiating pain to the ear and hoarseness. The vallecula is a depression at the base of the tongue. Pyriform sinus cancer is the most common primary site of hypopharynx cancers. The T value = tumor size and extension plus vocal cord mobility. SSFs for the head and neck – NPCR only requires SSF25, schema discriminator: Nasopharynx/Pharyngeal tonsil. The larynx is ~1.5 inches long. The vestibule is the first chamber/subsection, ventricle is the 2nd chamber/subsection, infraglottic or subglottic space is the 3rd chamber/subsection. The laryngeal prominence or the Adam’s apple is the front of the thyroid cartilage that comes to a point. The T value for the larynx has no size parameters, just extension. Quiz: 65 yo F presents with hoarseness x 3 months. 10/22/xx CT Soft tissues neck: soft tissue density/mass along LT of airway at the level of the epiglottis. There is asymmetry at the false cords with some prominence of the R false cord. 10/24/xx Laryngoscopy, bx: Final dx-invasive poorly diff scc. 10/31/xx PET CT: Multiple areas of intense increased uptake in the laryngeal area, corresponding to known cancer. Multiple bilateral hypermetabolic LNs affecting cervical chains (deep & superficial, posterior triangle). No evidence of distant mets. 11/12/xx Total laryngectomy w/R mod neck dissection, base of tongue resection, L mod neck dissection – R neck dissection revealed obviously mets LNs w/ significant extension to skull base, adherence to hypoglossal nerve & external carotid artery, removal resulting in sacrifice of internal jugular vein and sternocleidomastoid muscle; larynx was entered through the L side with complete visualization of the pyriform sinus which was negative. At the superior extension, tumor was easily visible and tongue base found to be full w/potential for tumor involvement. Frozen sections of margins were negative. 11/12/xx Path: Invasive scc, grade 3, poorly diff, epiglottis. Site: Epiglottis, entire. Size: 2.2 x 2.5 cm, ulcerated. Microscopic extension: inferiorly into anterior commissure, medial parts of L & R true cords, invasive superiorly to thyroid cartilage, invades into base of tongue. Margins negative. LVI positive, perineural invasion positive. LNS: L -1/1 Level V, 1/1 Hi jugular, 3/10 Hi cervical, 2/2 Low cervical; R – 7/7 Level II w/extranodal invasion, 2/2 Level III, 1/1 Level IV & 2/4 Level V w/ extranodal invasion; largest node measures 6 cm. Stage: cT2 cNX cM0 cStage Blank; pT4b pN2c pM Blank pStage IVb. cNX because PET CT noted positive LN mets but no LN size given. pT4b – carotid artery increased, pN2b – LN 6 cm (but not >6 cm). FYI: getbodysmart.com shows how different muscles and cartilages move.

AJCC TNM Staging of the Pancreas – April Fritz, RHIT, CTR

Pancreatic cancer accounts for 3% of all cancers in the US, 11th most common cancer in US men, 8th most common cancer in US women. Lifetime risk 1.5% (1 in 67). The incidence rate is increasing 1.2% per year 2002-2012 due to increased use of MRI and EUS. The pancreas is 15 cm long and retroperitoneal in location. It is a dual function organ: Exocrine – produces enzymes – 2 liters per day of digestive fluids to break down food, 95% of all pancreatic cancers are in the exocrine pancreas; Endocrine – produces hormones – 7 different hormones to control digestion & metabolism, 5% of all pancreatic cancers. Uncinate is Latin for hook-like. The uncinate process is where the head of the pancreas comes down and tucks behind the duodenum. The duodenum wraps around the pancreas and can be an area of direct extension. The celiac axis is where all the blood vessels come together. Risk factors – Exocrine pancreas – socioeconomic status (incidence higher in lower groups), smoking (3-4 times increased), obesity, alcohol use (particularly African Americans), diabetes, chronic pancreatitis, familial relapsing type, industrial chemicals (Benzidine & naphthylamine), older age (over 60), family history/genetic factors. TNM staging of the pancreas – there is one set of definitions for all subsites. T is based on size of tumor and extension beyond the pancreas, regional LNs vary by primary site and is N0 vs N1. The 7th edition stages both exocrine and endocrine histologies. There are no SSFs required. Patient Profile – 65 yo WF diabetic w/hx of weight loss, fatigue x 4 months, preparing for gastric banding, onset of painless jaundice & severe itching, liver enzymes markedly elevated, CA 19-9 reported as 703 (normal 0-36). MRI: distension of gallbladder & sludge noted in gallbladder; atrophy of pancreas & extensive pancreatic ductal dilatation 🡪 chronic pancreatitis. 2/27/14 Lap cholecystectomy: chronic cholecystitis w/cholelithiasis. Liver bx: acute pericholangitis, choledocholithiasis. Due to continued jaundice & itching – 3/19/14 Abd CT: intra- and extrahepatic ductal dilatation. Common bile duct dilated to 17 mm, not well visualized in pancreatic head. Marked pancreatic ductal dilatation; atrophy of pancreatic neck, body & tail. No pancreatic mass identified. Double-duct sign: simultaneous dilatation of common bile duct and pancreatic duct due to periampullary or head of pancreas carcinoma. Double-duct sign is a “red flag” for possible pancreatic cancer. 3/31/14 EUS & bx: No celiac adenopathy. Complete obstruction of common bile duct. 5x6 cm mass in head of pancreas involving portal vein. Biopsies x 4. 3/31/14 ERCP unsuccessful. 3/31/14 Pathology: FNA & FNA core bx = adenocarcinoma. 4/15/14 CT: intra- & extrahepatic biliary ductal prominence; marked dilatation of pancreatic duct measuring up to 12 mm in diameter. Indistinctness of pancreatic head & the periportal region w/out discrete mass identified. No evidence of encasement of the vascular structures. Enlarged periportal & portacaval LNs are unchanged. PET: F-18 is normal throughout the body. No abnormal abdominal activity. Therefore, the known pancreatic malignancy may be of low grade. 4/17/14 Op report: 1 cm mass in segment 4B of liver bxd, path negative; no macroscopic involvement of portal vein; firmness in uncinated process near superior mesenteric artery, frozen section negative for malignancy (pancreatitis). 4/17/14 Path: Liver bx no evidence of malignancy; celiac node 0/1 LN; third & fourth portion of duodenum 13 cm length of benign small bowel, no evid of malignancy; Whipple: mod diff pancreatic ductal ca extending through into peripancreatic adipose tissue and through duodenal wall into ampulla of Vater, all surgical margins free of tumor involvement, 2/12 LNs positive for mets ca, PanIN 1b present in multiple pancreatic duct branches; gastric antrum – distal partial gastrectomy = benign gastric wall; 0/9 LNs in attached adipose tissue. Primary site = C25.0 (head of pancreas), Histology = 85003 (ductal carcinoma). Staging: cT2 (over or equal to 2 cm, confined to pancreas), cN0, cM0 cStage IB; pT3 pN1 pM0 pStage 2B. Summary Stage 4 (regional both nodes & extension). Primary site surgery code = 37 (Whipple); Scope Reg LN code = 5 (4 or more regional LNs removed); Surgery Other Reg/Distant Site code = 0 (none) – liver bx and gastric antrum bx are not coded as surgery. FYI: 2/22 LNs = 9% positive LNs. Prognostic cut off is 15%. Treatment for stage IIB includes surgery, postop chemoradiation or postop chemotherapy alone. Per NCCN guidelines, adjuvant chemotherapy should be started within 12 weeks of surgery. Patient profiled above had a wound infection and treatment for that put her past the 12 week postop guideline of NCCN, therefore she did not receive chemotherapy.

Update on AJCC 8th Edition – Mahul B. Amin, MD, F CAP

The 1st edition of the AJCC Staging Manual came out in 1977 & the 7th edition was published in 2009. All disease sites will incorporate non-anatomic prognostic factors for stage grouping, if & as relevant. For the 8th edition, disease site expert panels were organized and composed of 18 members including surgical/medical/radiation oncologists, radiologists, anatomic & molecular pathologists, CAP representative and UICC representative. Stage Group will now be called Prognostic Stage Group throughout the 8th edition. Chapter 1 rules has been expanded & clarifies terminology, describes timeframe & criteria for each classification. A few new rules have been added based on changes in medical practice. Rules are in table format for easy reference. What’s New? Chapter Summary will include summary of major changes & applicable diseases – cancers staged/not staged using this staging system; summary of changes; ICD-O-3 topography codes; WHO/IARC histology codes. Anatomy – primary site(s), regional LNs, metastatic sites. Rules for Classification – clinical, imaging, pathological. Identification & discussion on non-TNM Prognostic Factors important to each disease will be included in each chapter including prognostic factors required for Prognostic Stage Grouping. New paradigms include HPV, neoadjuvant therapy – yc, yp, bone and soft tissue sarcomas. New features including an Imaging Section in each chapter. There are new chapters/staging systems and some chapters/staging systems have been merged (ovary, fallopian tube, primary peritoneal cancer) and some chapters have been deleted. Prognostic factor coding tables and instructions are in the FORDS manual.   
The 8th edition will be available in PDF format with rolling updates. There will be a cost (or subscription) to get the online PDF format. The 8th edition will be released to vendors in August, 2016 to incorporate into their software. Staging education will be offered to physicians. Short educational videos will be posted on the AJCC website. Registrar education will be free. The 8th edition is dedicated to all cancer registrars.

NCCN Guidelines in Your Toolbox – Theresa Vallerand, BGS, CTR

NCCN is a not-for-profit alliance of 26 cancer centers dedicated to improving the quality, effectiveness, and efficiency of cancer care so that patients can live better lives. NCCN promotes the importance of continuous quality improvement and recognizes the significance of creating clinical practice guidelines appropriate for use by patients, clinicians, and other health care decision makers. The NCCN home page address is <http://www.nccn.org>. NCCN guidelines for the treatment of cancer are listed by site. AJCC staging tables are included in each NCCN guideline for the respective disease site. There are guidelines for detection, prevention and risk reduction on the site. NCCN guidelines have universal appeal for surgeons, medical and radiation oncologists, palliative care and hospice medical professionals, cancer registrars, cancer programs, and cancer patients/survivors.

Update on the Impact of Molecular & Genetic Testing of Tumor: Customized Management of Solid Tumors – Hank C. Hill, MD

Challenges with cancer management include cancer risk and syndromes, environmental risks and lifestyle, hereditary breast and ovarian cancer, Lynch syndrome, genetics and signaling pathways, epigenetics, and cancer detection – access to screening, early vs late detection. Epigenetics – environment, temperature, radiation, food, drugs, nutrients produce immediate effects that can be imprinted long-term. Chemotherapy drugs effect cells that are doubling, are not very specific, and are cytotoxic. Target therapies are drugs that inhibit a more specific target, many are oral agents, and are a mixture of cytostatic and cytotoxic. Questions that can be answered by cancer biomarkers are: Prognostic – is it likely to develop into a cancer; Diagnostic – what type of cancer is it; Predictive – is this the optimal drug for the cancer; Pharmacodynamics – what is the optimal dose for patients body (for tumor effect); and Recurrence – will the cancer return or metastasize. A case example of a melanoma patient with a mass on left upper back for many years. March, 2015 the mass measured 6.8 x 2.8 x 5.9 cm. Biopsy confirmed melanoma. Genomic alterations include BRAF V600R IDH1R132C. Genetic testing costs $3,000-$5,000. There is a push by oncologists and government to reduce the cost. Gene sequencing is becoming less costly and their cost will ultimately decrease also.

TNM Staging of Cutaneous Melanoma & CAP Templates for Molecular Testing – Alexander Lazar, MD, MD Anderson Hospital, Pathology Director, Skin & Soft Tissue Pathology

Breslow is very important in cutaneous melanoma. Clark’s is not as important and does not really drive the stage anymore. The number of mitosis is important, especially in thin melanomas, it is important on outcome. Radial growth phase has greater metastatic potential. The size of mets in positive LNs is important (but different than LN mets size). Elevated LDH may have favorable response to treatment. There are many mutations in melanoma, i.e. oncogene tumor suppression genes. Selected known drivers are BRAF, PTEN, NRAS, MEK, ERK. Biomarkers (molecular) templates are fully optional except for breast that has been conditionally required at this time (if you do the test, report it). eCC = Electronic Cancer Checklist – CAP Protocol Templates.