

Head & Neck Cancer and the Art of Reconstruction
Dr. Todd Hanna

1. Overview of head and neck cancers?
 - a. Get a bad rap
 - b. Historically, disfigured from surgery
 - c. Quality of life
 - d. Now, with reconstruction, preserving life + quality of life
 - e. Very difficult region to reconstruct—oral cavity
 - f. Challenging to reconstruct
 - g. Head and neck oncology deals with all tumors of head/neck except for brain
 - h. 90% occur in oral cavity; most are squamous cell; mucosal lining of mouth and throat
 - i. Way cancers are treated depends on type, histology, location, stage, and patient status
2. How and why do patients get cancer? Men more than women? HPV cancers? Alcohol and tobacco?
 - a. Over last 15-20 years change in demographics; fewer people use alcohol and tobacco
 - b. Increase in HPV oropharynx [base of tongue]
 - c. HPV cancers are linked to virus, vaccine could decrease occurrence
 - d. Alcohol and tobacco together—tobacco smoke is carcinogenic, alcohol can harm cells
 - e. Alcohol damages cells, DNA has to unwind to repair itself, while DNA is unwound alcohol can damage molecules and they cannot repair
3. Treatment options—surgery, chemo, and radiation?
 - a. Radical head and neck dissection—past
 - b. 1940-1950 use more radiation and not such huge surgery
 - c. Radiation kills cancer cells and healthy cells-affect healing
 - d. Chemo-not as effective as radiation and surgery
 - e. 2015-increase use of immunotherapies [Optiva]
 - i. Target receptor cells and immune system will fight cancer cells
 - ii. Still experimental
 - f. Non-HPV cancers—surgery first
 - g. Tumors of BOT and tonsil that are HPV positive—huge surgery, significant post op morbidity
 - h. HPV cancers are responsive to radiation
 - i. Robot surgery [2008] without having to split mandible and lower lip
 - i. Currently T1 and T2—robotic surgery 1st and then radiation [de-escalation]
 - j. Look at patient's overall health status
4. Necessary evil for treatment but preserves quality of life? How do you best care for patients while preserving their well-being?
 - a. Form a connection with patients/rewarding/humbling
 - b. Hard on treatment team and family
 - c. Good outcomes = that's what carries you through the negative outcomes
 - d. In most cases, transplanting tissue looks really good/normal
 - e. Challenges from radiation therapy—affects patient healing and reconstruction
 - f. Heavily radiated [protonated??]—soft tissue injury seems to be greater from proton therapy
5. Radical neck dissection—how has surgery changed/reconstruction? Use forearm for reconstruction? Satisfaction from reconstruction?

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- a. Forearm was one of the earliest free flaps
 - b. Flap was originally used for burn victims
 - c. Used for tongue, laryngeal reconstruction
 - i. Treat hair down the road
 - d. Bone from hip, scapular---tissue from back, thigh
 - e. Why don't you do face transplants?
 - i. Immunosuppression required for face transplant would be problem for cancer patients
 - f. Geared toward aesthetics, quality of life, meaningful life, restoration
6. Why head and neck surgery? And does background in sculpture and art help with surgical process?
- a. 5 year old—bitten by dog on lip
 - b. Surgeon would sketch anatomy and repair—education
 - c. Positive—drawing lip reconstruction
 - d. Grew from process—had opposite effect than could have been
 - e. Surgery is more of an art than science
 - f. Sketch out surgery, then virtually, then in his mind
7. Beautiful story of paying it forward. Most impactful patient story?
- a. Humbling—not motivation, relationships, powerfully humbling
 - b. Doctors are gaining from experience—feel gratitude towards patients
 - c. HC—advanced tumor of lower jaw—spread from left to right
 - d. Surgery had wonderful outcome aesthetically: 2 years out
 - i. Acting and theater
 - ii. Being able to get her to point where she looks completely normal
 - iii. Add to her life; her life be better
 - e. MS—[public/patient privacy]—Stage IV tongue cancer
 - i. British citizen—surgery for free
 - ii. Radiation and chemo
 - iii. Artist
 - iv. Pushing career to edge—strong individual