## Testis Scenario #1

**History**

This is a 42-year-old gentleman who noticed a palpable left testicular mass. Chest x-ray, CT scan of the abdomen and pelvis and screening serum testicular cancer tests are negative.

**Imaging**:

Sonogram: Multiple areas of Hypoechoic heterogeneity. Overall diameter up to 2.5cm. Appearance is suspicious for malignancy

**Pre-op Tumor Markers**: AFP 2 ng/mLl (normal 0 – 9); BHCG < 2 mIU/mL (normal < 2); LDH 197 units/L (normal 100 – 230).

**Pathology**: Left radical orchiectomy

CAP Checklist

SPECIMEN TYPE: Left radical orchiectomy

SPECIMEN LATERALITY: Left

TUMOR FOCALITY: Unifocal

TUMOR SIZE: 1.8 cm in greatest dimension of tumor

ADDITIONAL DIMENSIONS: 1.6 x 1.4 cm

MACROSCOPIC EXTENT OF TUMOR: Confined to testes

HISTOLOGIC TYPE: Seminoma, classic type

SPERMATIC CORD: Uninvolved by tumor

MICROSCOPIC TUMOR EXTENSION: None identified

LYMPHOVASCULAR INVASION: Absent

PATHOLOGIC STAGING:

Primary tumor: pT1a, tumor limited to testes

Regional lymph nodes: pNX

Distant metastasis: Not applicable

**Treatment**:

* Surgery: Left radical orchiectomy.

Post-op lab markers were not completed due to urologist stating they were not required since they were negative prior to surgery.

**POST-OP RAD ONC CONSULTATION**: They are here today primarily to discuss treatment options with regard to his disease and its potential for recurrence. Given his disease stage, we discussed recurrence potential of approximately 15 percent to 20 percent. We discussed the alternatives of observation alone, adjuvant radiation therapy, or single-agent carboplatinum.

**Postop adjuvant RT**: 22.5GY peri-aortic lymph nodes, 18MV photons

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| Scenario 1 | | | | | | | | |
| Primary Site | **C62.1** | Clinical Grade | | | 9 | Tumor Size Summary | | 018 |
| Histology | 9061 | Pathological Grade | | | 9 | Tumor Size Clinical | | 025 |
| Behavior | 3 | Post Therapy Grade | | |  | Tumor Size Pathological | | 018 |
| MP Rule | M2 | H Rule | | | H11 | Lymphovascular Inv | | 0 |
|  | | | | | | | | |
| Stage Data items | | | | | | | | |
| Clinical T | cTX | Pathological T | | | pT1a | Post-Therapy T | |  |
| cT Suffix |  | pT Suffix | | |  | ypT Suffix | |  |
| Clinical N | cN0 | Pathological N | | | pNX | Post-Therapy N | |  |
| cN Suffix |  | pN Suffix | | |  | ypN Suffix | |  |
| Clinical M | cM0 | Pathological M | | | cM0 | Post-Therapy M | |  |
| Clinical Stage | 99 | Pathological Stage | | | 99 | Post-Therapy Stage | |  |
|  | | | | | | |
| Summary Stage 2018 | | | **1-localized** | | | |
| EOD Primary Tumor | | | **100** | | | |
| EOD Regional Nodes | | | **000** | | | |
| EOD Mets | | | **00** | | | |
|  | | | | | | |
| SSDIs | | | | | | |
| S Category Clinical | | | | 0 | | |
| S Category Pathological | | | | 0 | | |
| AFP Pre-Orchiectomy Lab Value | | | | 2.0 | | |
| AFP Pre-Orchiectomy Range | | | | 0 | | |
| hCG Pre-Orchiectomy Lab Value | | | | 1.9 | | |
| hCG Pre-Orchiectomy Range | | | | 0 | | |
| LDH Pre-Orchiectomy Range | | | | 0 | | |
| AFP Post-Orchiectomy Lab Value | | | | XXXXX.9 | | |
| AFP Post-Orchiectomy Range | | | | 9 | | |
| hCG Post-Orchiectomy Lab Value | | | | XXXXX.9 | | |
| hCG Post-Orchiectomy Range | | | | 9 | | |
| LDH Post-Orchiectomy Range | | | | 9 | | |
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| Surgical Diagnostic Staging Procedure | | 00 | |
| Surgery | | | |
| Surgical Procedure of Primary Site | | 40 | |
| Scope of Regional Lymph Node Surgery | | 00 | |
| Surgical Procedure Other Site | | 0 | |
| Systemic Therapy | | | |
| Chemotherapy | | 00 | |
| Hormone Therapy | | 00 | |
| Immunotherapy | | 00 | |
| Hematologic Transplant | | 00 | |
| Systemic/ Surgery Sequence | | 0 | |
|  | |  | |
| Radiation | | | | | |
|  | Phase 1 | | Phase 2 | | Phase 3 |
| Rad Primary Treatment Volume | 05 | |  | |  |
| Rad Treatment Modality | 02 | |  | |  |
| Radiation to Draining Lymph Nodes | 88 | |  | |  |
| Ext Beam Rad Planning Technique | 01 | |  | |  |
| Dose per Fraction | 99999 | |  | |  |
| Number of Fractions | 999 | |  | |  |
| Total Dose | 002250 | |  | |  |
| # of Phases of Rad Tx to this Volume | 01 | | | | |
| Rad Treatment Discontinued Early | 01 | | | | |
| Total Dose | 002250 | | | | |
| Radiation/ Surgery Sequence | 3 | | | | |

## Testis Scenario #2

**History:** Patient is here for scrotal swelling. The mass on the left side has grown in size. He does have testicular pain on the left side. He has a history of hernia repair and varicocele repair when he was 14.

**Pre-op labs**: AFP 4.7 ng/mL (normal 0 – 8); BHCG: 51.48mIU/mL (< 5000 mIU/mL); LDH 1447 IU/L (313-618 IU/L)

**Imaging**: Sonogram: 8.1 cm left testicular mass concerning for malignancy.

**Pathology**

SPECIMEN TYPE: Left radical orchiectomy

SPECIMEN LATERALITY: Left

TUMOR FOCALITY: Multifocal (two foci of 5 cm and 2.7cm)

TUMOR SIZE (GREATEST DIMENSION OF MAIN TUMOR MASS): 5 cm

GREATEST DIMENSION OF ADDITIONAL TUMOR NODULES: 2.7 cm

MICROSCOPIC EXTENT OF TUMOR: Confined to the testis

HISTOLOGIC TYPE: Mixed germ cell tumor

Embryonal carcinoma (85%)

Seminoma (10%)

Yolk sac tumor (5%)

MARGINS: Spermatic cord margin: Uninvolved by tumor

Other margins: Uninvolved by tumor

MICROSCOPIC TUMOR EXTENSION: Not identified

LYMPH-VASCULAR INVASION: Indeterminate (see comment)

PATHOLOGIC STAGING

TNM descriptors: m(multiple)

Primary tumor: pT1(m): Tumor limited to the testis and epididymis without definitive vascular/lymphatic invasion

Regional lymph nodes: pNX: Cannot be assessed (no nodes submitted or found)

Distant metastasis: Not applicable

SERUM TUMOR MARKERS: At least S1

Beta-HCG: 51.48mIU/mL (<5000 mIU/mL)

LDH: 1447 IU/L (313-618 IU/L)

AFP: 4.7 ng/ml (normal 0 – 8)

ADDITIONAL PATHOLOGIC FINDINGS: Atrophy

**Comment (Verified)**

An immunohistochemical stain for CD31 was performed on blocks 1B, 1C, and 1E in an attempt to document the presence or absence of lymph-vascular invasion. No definite lymph-vascular invasion is identified. Rare vessels contain some tumor cells within the lumen, but this may represent an artifactual displacement during sectioning. Because lymph-vascular invasion is not definite, the tumor will be staged as a pT1 lesion.

**Treatment**: Surgery: Left radical orchiectomy.

**Post-op Labs:** AFP 3.2 ng/mL (normal 0 – 8); BHCG < 2.39 mIU/mL (normal 0 – 1); LDH 412 IU/L (norm 313 – 618)

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| Scenario 2 | | | | | | | | |
| Primary Site | **C62.1** | Clinical Grade | | | 9 | Tumor Size Summary | | 050 |
| Histology | 9085 | Pathological Grade | | | 9 | Tumor Size Clinical | | 081 |
| Behavior | 3 | Post Therapy Grade | | |  | Tumor Size Pathological | | 050 |
| MP Rule | M18 | H Rule | | | H30 | Lymphovascular Inv | | 9 |
|  | | | | | | | | |
| Stage Data items | | | | | | | | |
| Clinical T | cTX | Pathological T | | | pT1 | Post-Therapy T | |  |
| cT Suffix |  | pT Suffix | | | (m) | ypT Suffix | |  |
| Clinical N | cNX | Pathological N | | | pNX | Post-Therapy N | |  |
| cN Suffix |  | pN Suffix | | |  | ypN Suffix | |  |
| Clinical M | cM0 | Pathological M | | | cM0 | Post-Therapy M | |  |
| Clinical Stage | 99 | Pathological Stage | | | 99 | Post-Therapy Stage | |  |
|  | | | | | | |
| Summary Stage 2018 | | | **1 local** | | | |
| EOD Primary Tumor | | | **200** | | | |
| EOD Regional Nodes | | | **000** | | | |
| EOD Mets | | | **00** | | | |
|  | | | | | | |
| SSDIs | | | | | | |
| S Category Clinical | | | | 2 | | |
| S Category Pathological | | | | 1 | | |
| AFP Pre-Orchiectomy Lab Value | | | | 4.7 | | |
| AFP Pre-Orchiectomy Range | | | | 0 | | |
| hCG Pre-Orchiectomy Lab Value | | | | 51.5 | | |
| hCG Pre-Orchiectomy Range | | | | 0 | | |
| LDH Pre-Orchiectomy Range | | | | 2 | | |
| AFP Post-Orchiectomy Lab Value | | | | 3.2 | | |
| AFP Post-Orchiectomy Range | | | | 0 | | |
| hCG Post-Orchiectomy Lab Value | | | | 2.3 | | |
| hCG Post-Orchiectomy Range | | | | 1 | | |
| LDH Post-Orchiectomy Range | | | | 0 | | |
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| Surgical Diagnostic Staging Procedure | | 00 | |
| Surgery | | | |
| Surgical Procedure of Primary Site | | 40 | |
| Scope of Regional Lymph Node Surgery | | 00 | |
| Surgical Procedure Other Site | | 0 | |
| Systemic Therapy | | | |
| Chemotherapy | | 00 | |
| Hormone Therapy | | 00 | |
| Immunotherapy | | 00 | |
| Hematologic Transplant | | 00 | |
| Systemic/ Surgery Sequence | | 0 | |
|  | |  | |
| Radiation | | | | | |
|  | Phase 1 | | Phase 2 | | Phase 3 |
| Rad Primary Treatment Volume | 00 | |  | |  |
| Rad Treatment Modality | 00 | |  | |  |
| Radiation to Draining Lymph Nodes |  | |  | |  |
| Ext Beam Rad Planning Technique |  | |  | |  |
| Dose per Fraction |  | |  | |  |
| Number of Fractions |  | |  | |  |
| Total Dose |  | |  | |  |
| # of Phases of Rad Tx to this Volume | 00 | | | | |
| Rad Treatment Discontinued Early | 0 | | | | |
| Total Dose | 000000 | | | | |
| Radiation/ Surgery Sequence |  | | | | |

## Testis Scenario #3

**HISTORY**: 34 year old male in E.R. with large very firm testicular tumor about 9 cm in size, consistent with possible malignancy by exam and ultrasound.

**Pre-op labs**: AFP = 83 (H), BHCG 3 mIU/mL (normal 0 – 5); LDH 293 u/L (normal 100 – 230)

**Treatment**: 5/18/xx Left radical orchiectomy path CAP

SPECIMEN TYPE: Left radical orchiectomy

SPECIMEN LATERALITY:  Left

TUMOR FOCALITY:  Unifocal

TUMOR SIZE:  9.5 x 7.9 x 6.4 cm

MICROSCOPIC EXTENT OF TUMOR:  Confined to the testis

HISTOLOGIC TYPE:  Teratoma (90%) and yolk sac tumor (10%) with focal  rhabdomyosarcomatous differentiation

MARGINS

         Spermatic cord margin:  Uninvolved by tumor

         Other margins:  Uninvolved by tumor

LYMPH-VASCULAR INVASION:  Present

PATHOLOGIC STAGING

         Primary tumor:  pT2

         Regional lymph nodes:  pNX

         Distant metastasis:  No applicable

**Post-orchiectomy markers**:  AFP = 193 (H), LDH = 201 (N), BETA HCG NOT REPEATED

**Post-op CT abd/pelvis**: Prominent 3.3cm para-aortic and 1.3cm aortocaval lymph nodes noted within the upper to mid abdomen concerning for metastatic disease. Additional right retrocrural lymph node 1.8cm, subcarinal/paraesophageal lymph node 1.6cm, soft tissue nodule in the periphery of the right lower lobe as well as nodular area of pleural thickening in the medial aspect of left lung base are seen suspicious for additional areas of metastatic disease.

**Post-op medical oncology consultation**:  Good risk, nonseminomatous, left testicular mixed germ cell carcinoma. The patient will require chemotherapy after he heals from the surgery.  A typical course would be 3 cycles of BEP (Bleomycin, Etoposide, Cisplatin). Side effects of treatment can include nausea, vomiting, alopecia, low counts with a risk of infection, lung toxicity from Bleomycin, possible damage to the nerves and kidneys. (Chemo began 6/19/xx)

**Post-chemo scans** showed enlargement of mediastinal adenopathy and lung nodules.  Referred to specialty university hospital.  Recommended excision of metastatic tissue in 3-stage procedures.

9/27/xx Mediastinal lymph node dissection and removal of pulmonary mets.

11/19/xx RPLND right: 0/4 periaortic LN, 1/7 interaortocaval LN

2/12/yy RPLND left: 3/5 paracaval LN in 8.8cm mass

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| Scenario 3 | | | | | | | | |
| Primary Site | **C62.1** | Clinical Grade | | | 9 | Tumor Size Summary | | 095 |
| Histology | 9085 | Pathological Grade | | | 9 | Tumor Size Clinical | | 090 |
| Behavior | 3 | Post Therapy Grade | | |  | Tumor Size Pathological | | 095 |
| MP Rule | M2 | H Rule | | | H16 | Lymphovascular Inv | | 1 |
|  | | | | | | | | |
| Stage Data items | | | | | | | | |
| Clinical T | cTX | Pathological T | | | pT2 | Post-Therapy T | |  |
| cT Suffix |  | pT Suffix | | |  | ypT Suffix | |  |
| Clinical N | cNX | Pathological N | | | pNX | Post-Therapy N | |  |
| cN Suffix |  | pN Suffix | | |  | ypN Suffix | |  |
| Clinical M | cM0 | Pathological M | | | cM1a | Post-Therapy M | |  |
| Clinical Stage | 99 | Pathological Stage | | | 3A | Post-Therapy Stage | |  |
|  | | | | | | |
| Summary Stage 2018 | | | **7 Distant** | | | |
| EOD Primary Tumor | | | **300** | | | |
| EOD Regional Nodes | | | **300** | | | |
| EOD Mets | | | **50** | | | |
|  | | | | | | |
| SSDIs | | | | | | |
| S Category Clinical | | | | 1 | | |
| S Category Pathological | | | | 1 | | |
| AFP Pre-Orchiectomy Lab Value | | | | 83.0 | | |
| AFP Pre-Orchiectomy Range | | | | 1 | | |
| hCG Pre-Orchiectomy Lab Value | | | | 3.0 | | |
| hCG Pre-Orchiectomy Range | | | | 0 | | |
| LDH Pre-Orchiectomy Range | | | | 1 | | |
| AFP Post-Orchiectomy Lab Value | | | | 193 | | |
| AFP Post-Orchiectomy Range | | | | 1 | | |
| hCG Post-Orchiectomy Lab Value | | | | XXXXX.9 | | |
| hCG Post-Orchiectomy Range | | | | 0 | | |
| LDH Post-Orchiectomy Range | | | | 0 | | |
|  | | | | | | |

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| Surgical Diagnostic Staging Procedure | | 00 | |
| Surgery | | | |
| Surgical Procedure of Primary Site | | 40 | |
| Scope of Regional Lymph Node Surgery | | 00 | |
| Surgical Procedure Other Site | | 0 | |
| Systemic Therapy | | | |
| Chemotherapy | | 03 | |
| Hormone Therapy | | 00 | |
| Immunotherapy | | 00 | |
| Hematologic Transplant | | 00 | |
| Systemic/ Surgery Sequence | | 3 | |
|  | |  | |
| Radiation | | | | | |
|  | Phase 1 | | Phase 2 | | Phase 3 |
| Rad Primary Treatment Volume | 00 | |  | |  |
| Rad Treatment Modality | 00 | |  | |  |
| Radiation to Draining Lymph Nodes |  | |  | |  |
| Ext Beam Rad Planning Technique |  | |  | |  |
| Dose per Fraction |  | |  | |  |
| Number of Fractions |  | |  | |  |
| Total Dose |  | |  | |  |
| # of Phases of Rad Tx to this Volume | 00 | | | | |
| Rad Treatment Discontinued Early | 0 | | | | |
| Total Dose | 000000 | | | | |
| Radiation/ Surgery Sequence | 0 | | | | |