

Tumor Size:

Greatest dimension of main tumor mass: 2.5 cm

Germ cell neoplasia in situ (GCNIS):

Identified

Lymphovascular Invasion:

Suspicious for lymphovascular invasion

Rete Testis Invasion:

Identified

Stromal invasion

Hilar Soft Tissue Invasion:

Not identified

Tunica Invasion:

Not identified

Epididymis Invasion:

Not identified

Spermatic Cord Invasion:

Not identified

Scrotal Wall Invasion:

Not identified

Spermatic Cord Margin Invasion:

Not identified

Non-Neoplastic Testis:

Active spermatogenesis

Lymph Nodes:

No lymph nodes submitted or found

Pathologic Stage Classification (AJCC 7th Edition):**Primary Tumor (pT):**

pT1: Tumor limited to the testis and epididymis without vascular/lymphatic invasion; tumor may invade into the tunica albuginea but not the tunica vaginalis

pNX: Regional lymph node cannot be assessed

Comment: Case also reviewed with Dr. Victor Reuter, who concurs.

*** From: Surgical Pathology - 03.18.20 @ 09:50 ***

DIAGNOSIS:

1. Para aortic lymph nodes:
- Ten benign lymph nodes (0/10).

2. Right spermatic cord:
- No viable tumor identified.
- Spermatic cord tissue with intravascular organized thrombi and macrophage accumulation.

3. Para caval lymph nodes:
- Benign fibroadipose tissue in an entirely submitted specimen.

4. Intra caval tumor:
- No viable tumor identified.

- Fibrovascular and fibroadipose tissue with chronic inflammation and focal hemosiderin-laden macrophages.

5. Interaorta caval lymph node:
 - No viable tumor identified.
 - Seven lymph nodes identified; see comment.

Comment: One lymph node shows dense fibrosis/sclerosis and hemosiderin-laden macrophage accumulation, consistent with therapy effect.

6. Intra caval tumor thrombus:
 - No viable tumor identified.
 - Dense fibrotic/sclerotic tissue with recanalization and hemosiderin-laden macrophages, consistent with organized thrombus.

7. Precaval mass:
 - Residual teratoma and secondary somatic transformation/malignancy, in the form of rhabdomyosarcoma, associated with necrosis and macrophage accumulation; see comment.
 - Three discrete uninvolved lymph nodes are also identified.

Comment: In some regions of the residual tumor, rhabdomyoblastic-appearing cells are found in and amongst other teratomatous elements; however, in areas, sheets of rhabdomyoblastic cells occupy expansile fields (greater than 4x magnification), consistent with secondary somatic malignancy. The latter component is highlighted by strong positive staining with desmin and myogenin by immunohistochemistry. Selected slides of part seven of this case were reviewed with Drs. V. Reuter (GU Pathology) and M. Hameed (Soft Tissue Pathology), who concur with the diagnosis.

8. Para-caval lymph node:
 - Two benign lymph nodes (0/2).

9. Intra caval tumor #2:
 - No viable tumor identified.
 - Fibrovascular and fibroadipose tissue with chronic inflammation and focal hemosiderin-laden macrophages.

10. Inter iliac lymph node:
 - One benign lymph node (0/1).

11. Inter-caval thrombus (fs):
 - No viable tumor identified.
 - Dense fibrotic/sclerotic tissue with recanalization and hemosiderin-laden macrophages, consistent with organized thrombus.

12. Inter caval thrombus #2:
 - No viable tumor identified.

- Dense fibrotic/sclerotic tissue with recanalization and
hemosiderin-laden macrophages, consistent with organized thrombus

13. Vena cava:
- Large caliber vessel with focal organized thrombus.

LAB RESULTS:

CBC (04-01-20):

10.8<L>
7.2 >—< 374
32.7<L>

Abs Neut: 4.0

BMP (04-01-20):

134 99 14
-----<96
4.4 23 0.8

Ca (04-01-20): 9.5
Mg (04-01-20): 2.1
Phos(04-01-20): -

LFT (04-01-20):

Prot 7.5 Alb 4.1

Tbil 0.8 Dbil -

AST 50<H> ALT 74<H>

^
AlkP 107

Lipase (04.01.20 @ 05:36)
Lipase, Plasma: 611 U/L
Lipase (03.31.20 @ 04:59)
Lipase, Plasma: 728 U/L
Lipase (03.30.20 @ 04:58)
Lipase, Plasma: 915 U/L
Lipase (03.29.20 @ 05:01)
Lipase, Plasma: 999 U/L
Lipase (03.28.20 @ 15:52).

Assessment:

24 year old man with intermediate risk stage III NSGCT s/p inguinal orchiectomy in Sept 2019 in Israel foun to have RP mets s/p BEP x 3 and EP x 1 and an RPLND at MSKCC in March 2020, pathology found teratoma interspersed with rhabdomyosarcomatous components. Required IV/C resection given invasion - only non-viable thrombus was found on pathology. He was referred by the GU team to sarcoma medical oncology to discuss next steps in therapy given new diagnosis of rhabdomyosarcoma.

We discussed the importance of consolidative chemotherapy to treat the rhabdomyosarcoma. He seems to have recovered from covid and is recovering from his surgery. Moshe does have a slight neuropathy which we will need to follow. We outlined a plan of rhabdomyosarcoma

treatment with Vincristine, Adriamycin and Cytoxan. Ideally we would like to administer around 8 cycles q3 weeks with growth factor support, substituting dactinomycin for the doxorubicin when maximum doses are reached. It is difficult to know the exact number of cycles that Moshe will tolerate due to treatment for his germ-cell tumors. However, if feasible, retracted administration is recommended to help eradicate any residual RMS.

Plan:

- # RMS arising in teratoma (second somatic malignancy)
 - Plan for adjuvant VAC
 - Would need pre-tx labs and TTE
 - Fertility discussed
 - Patient to decide if he would like treatment in Israel. We will liaise with his local oncologist re our recommendation
 - Portacath is preferred
 - Next Generation sequencing of the RMS
- # Intermediate-risk, stage III-B (pT1 cN3 M0 S2) mixed NSGCT of the right testis
- Will need repeat HCG, AFP, LDH
- # IVC thrombus
- Lovenox
- # COVID-19 Lipase, and LFTs prior to start

Neuropathy - may need symptomatic and medicinal support. Will have to watch with the vincristine.

Attestation Statement:

ATTENDING STATEMENT: I have seen and examined the patient. I have reviewed/edited and agree with the history, physical exam and assessment/plan as documented by the Fellow/Resident above.

Fax to External MDs:

Fax/External CC: External provider info is not available

Electronic Signatures:

Rosenbaum, Evan (MD Fellow) (Signed 04/20/2020 15:22)

Authored: SERVICE, CHIEF COMPLAINT, STATUS, VISIT DETAILS, COMORBIDITIES, HISTORY OF PRESENT ILLNESS, MEDICATIONS, ALLERGIES, ONCOLOGY HISTORY, PMSH, REVIEW OF SYSTEMS, PHYSICAL EXAM, DATA REVIEW, LAB RESULTS, MEDICAL DECISION MAKING, TIME SPENT, ATTESTATION STATEMENT, INTERNAL/EXTERNAL CC

Tap, William Douglas (MD Attending) (Signed 04/21/2020 13:26)

Authored: PHYSICAL EXAM, MEDICAL DECISION MAKING, ATTESTATION STATEMENT, INTERNAL/EXTERNAL CC

Last Updated: 04/21/2020 13:26 by Tap, William Douglas (MD Attending)

rise in HCG to 4.5 with stable AFP of 4.7 and LDH 243. MRI brain with and without contrast on 3/12 to evaluate the rise in HCG demonstrated no evidence of brain metastasis. PET scan on 3/13/20 demonstrated a mildly FDG-avid aortocaval mass measuring 6.8 x 5.2cm compressing the IVC with SUV 8.0 and no other sites of metastasis or FDG-avidity noted. On 3/16/20, HCG was 6.3 with AFP 5.0 and LDH 236.

Given the lack of FDG-avidity or any site of metastasis outside of the retroperitoneum, decision was made to proceed with PC-RPLND, performed by Dr. Sheinfeld on 3/18/20. Due to the mass invading into the distal vena cava including approximately 50% of the circumference of the distal IVC and proximal R and L common iliac veins, Dr. Bains was called into the OR to perform a cavotomy. An IVC graft was attempted but this did not result in satisfactory blood flow and therefore decision was made to resect the IVC from the level of the renal vein down to the proximal iliac vein. Pathology demonstrated the 13 nodes and spermatic cord to be negative for GCT and teratoma. However, the pre caval mass demonstrated teratoma with secondary somatic malignancy in the form of rhabdomyosarcoma interspersed within the teratomatous elements. Within the IVC there was no evidence of tumor but organized thrombus was seen. HCG postop was 0.9 on 3/20 and <0.5 on 3/23/20.

His postop course was complicated by diagnosis with covid19 pneumonia on 3/24/20. He had mild oxygen requirement and elevated lipase to peak of 999 on 3/30, decreasing to 611 by 4/1/20. CT CAP on 3/28/20 showed bilateral peribronchial opacities consistent with covid19 pneumonia as well as moderate R>L pleural effusions, stable mesenteric LNs, and postoperative changes. In addition, AST/ALT increased to 142/126 on 3/29 with improvement to AST 50/ALT 74 on 4/1/20. His condition improved and he was able to be discharged off oxygen on 4/1/20.

He has been recovery since discharge and is now referred by Dr. Sheinfeld for initial consultation and discussion of management options/recommendations. Given the extraordinary circumstances surrounding the COVID-19 outbreak and both CDC and MSK guidelines protecting individuals and the community, I called the patient in lieu of an in-person visit. The patient was informed that the telephone visit is a billable visit to his or his insurance company and agreed to proceed.

Today, he reports:

- feels well overall with good energy and appetite
- no residual cough or sob from covid19 pneumonia, no fever, chills, or sweats
- denies abdominal and back pain
- main complaints are increased paresthesias in the feet as well as retrograde ejaculation
- chronic R toe "drop" since initial diagnosis in 9/2019, now improving.

Outpatient Medications:

- **levalbuterol 45 mcg/inh inhalation aerosol:** 1 puff(s) inhaled every 4 hours, As Needed
-Shortness of Breath
- **Lovenox 30 mg/0.3 mL injectable solution:** 30 milligram(s) subcutaneously every 12 hours x 7 days
- **famotidine 20 mg oral tablet:** 1 tab(s) orally once a day
- **oxyCODONE 5 mg oral tablet:** 1 tab(s) orally every 4 hours, As needed, Moderate to Severe Pain MDD:4
- **acetaminophen 325 mg oral tablet:** 2 tab(s) orally every 6 hours, As needed, Mild Pain or Fever
- **Colace 100 mg oral capsule:** 1 cap(s) orally 2 times a day x 10 days. HOLD FOR LOOSE STOOLS
- **esomeprazole 40 mg oral delayed release capsule:** 1 cap(s) orally once a day

Allergies:

- No known allergies.

Oncology History:

09/16/19: Scrotal US = multiple hypoechoic processes in right testis suspicious for malignancy

09/22/19: HCG 476, AFP 1104, LDH 434

09/22/19: CT CAP = large retroperitoneal mass, partly vascular measuring 9.0 x 8.5cm without a clear plane of separation from the IVC.

10/03/19: Right radical orchiectomy, PATH = multifocal seminoma, largest focus 2.5cm, pT1, suspicious for LVI, with rete testis involvement.

10/20/19: HCG 642, AFP 1244, LDH 406

12/29/19: HCG 1.8

10/20 to 1/2/20: BEPx3 followed by EPx1

02/05/20: CT head, neck, CAP = 9.5 x 7.2 x 6.6cm with continued narrowing of IVC. No other sites of disease noted.

03/04/20: HCG 2.1, AFP 5.3, LDH 241 at MSKCC

03/05/20: Initial consult with Dr. Sheinfeld.

03/05/20: CT CAP = 1) unchanged retroperitoneal precaval/interaortocaval mass measuring 6.8 x 5.2 x 10cm with mass effect and compression of the IVC, however decreased compared to more remote prior exam on 9/22/19 when it measured 8.8 x 7.9 x 10.1cm with unchanged encasement of the IMA, proximal R common iliac artery, and abutment of the abdominal aorta by the mass. 2) scattered subcentimeter short axis mesenteric nodes unchanged at 1.0 x 0.7cm.

03/12/20: HCG 4.5, AFP 4.7, LDH 243

03/12/20: MRI brain = no brain mets

03/13/20: PET scan = mildly FDG-avid aortocaval mass measuring 6.8 x 5.2cm compressing the IVC with SUV 8.0 and no other sites of metastasis or FDG-avidity noted.

03/16/20: HCG 6.3, AFP 5.0, LDH 236

03/18/20: PC-RPLND and IVC resection by Dr. Sheinfeld and Dr. Bains. PATH = all 13 nodes and spermatic cord to be negative for GCT and teratoma BUT precaval mass positive for teratoma with secondary somatic malignancy in the form of rhabdomyosarcoma interspersed within the teromatous elements. IVC with organized thrombus but not tumor. Margins negative

03/20/20: HCG 0.9

03/23/20: HCG <0.5 . HCG postop was 0.9 on 3/20 and <0.5 on 3/23/20.

His postop course was complicated by diagnosis with covid19 pneumonia on 3/24/20. He had mild oxygen requirement and elevated lipase to peak of 999 on 3/30, decreasing to 611 by 4/1/20. In addition, AST/ALT increased to 142/126 on 3/29 with improvement to AST 50/ALT 74 on 4/1/20. His condition improved and he was able to be discharged off oxygen on 4/1/20.

He has been recovery since discharge and is now referred by Dr. Sheinfeld for initial consultation and discussion of management options/recommendations.

Past Medical History:

Mumps including testicular involvement as a child

Covid19 pneumonia 3/24/20

IVC thrombus.

Past Surgical History:

Right orchiectomy on 9/16/2019

PC-RPLND plus IVC resection by Dr. Sheinfeld and Dr. Bains on 3/18/20.

Tobacco Use:

Never Smoker.

Social History:

Occupation: Rabbinical Student in Israel

Marital status /children: Married with 6 month old son

DATE: 04/13/2020

ACCT: 81704428

PROVIDER: Feldman, Darren (MD) 014357

Last Updated: 04/13/2020 11:26 PM
Service Date: 04/13/2020 09:28 AM

Service:

Genitourinary Oncology.

Chief Complaint:

Intermediate-risk, stage III-B mixed NSGCT of the right testis with metastasis to retroperitoneal LNs s/p BEPx3 followed by EPx1 with residual mildly elevated HCG, followed by post-chemotherapy RPLND on 3/18/20 revealing teratoma with secondary somatic malignancy in the form of rhabdomyosarcoma, referred by Dr. Sheinfeld for further evaluation and management recommendations.

Consult requested by: Joel Sheinfeld.

Visit Details:

The patient was accompanied by family. Family in attendance: brother.

Remote Care Options:

This was communication via telephone only. 60 minutes.

Preferred Language:

Hebrew.

The participant and/or authorized representative(s) states their preferred language for health care discussion is Hebrew.

Interpreter services were used.

History of Present Illness:

Mr. Aizenshtat is a 24-year-old Hebrew-speaking man from Israel whose history dates back to 4/2019 when he started to experience right hip and back pain. This progressively worsened and in 9/2019, he was found to have a right testis mass. Scrotal US on 9/16/19 showed multiple hypoechoic processes in the right testis suspicious for malignancy. Baseline tumor markers were HCG 476, AFP 1104, and LDH 434. Rete testis involvement by seminoma was identified. CT CAP on 9/22/19 showed a large retroperitoneal mass, partly vascular measuring 9 x 8.5cm without a clear plane of separation from the IVC. He underwent right radical inguinal orchiectomy on 10/03/19 demonstrating per MSKCC review, multifocal (largest focus 2.5cm) seminoma with focal scar, likely representing partially regressed GCT. There were areas suspicious for LVI although this was not definitive and it was staged as pT1. Post-orchiectomy tumor markers remained elevated with HCG rising to 642 and AFP to 1244 with LDH stable at 406.

For intermediate-risk, stage III-B mixed NSGCT (seminoma + elevated AFP), he received chemotherapy consisting of 3 cycles of BEP followed by 1 cycle of EP from 10/20/19 to 01/02/20. His peak HCG was 1751 and peak AFP was 3044. Post-chemotherapy, CT head, neck, and CAP on 2/5/20 demonstrated a slight decrease in the size of the retroperitoneal mass to 9.5 x 7.2 x 6.6cm with continued narrowing of the IVC. No other sites of disease noted. HCG and AFP were reportedly normal in Israel. A value of HCG on 12/29/19 is not completely legible but appears to be 1.8 or 2.8 with the ULN being 5.

He was recommended for post-chemotherapy RPLND and opted to come to MSKCC and see Dr. Sheinfeld. Markers at MSKCC on 3/4/20 were HCG 2.1, AFP 5.3, and LDH 241, all within normal limits. On 03/05/20, CT CAP at MSKCC demonstrated an unchanged retroperitoneal precaval/interaortocaval mass measuring 6.8 x 5.2 x 10cm with mass effect and compression of the IVC, however decreased compared to more remote prior exam on 9/22/19 when it measured 8.8 x 7.9 x 10.1cm. There was unchanged encasement of the IMA, proximal R common iliac artery, and abutment of the abdominal aorta by the mass. Scattered subcentimeter short axis mesenteric nodes were unchanged at 1.0 x 0.7cm. Repeat HCG on 3/12/20 demonstrated slight

Smoking: Never smoker
Alcohol: social
Illicit drugs: none.

Family History:

No family history of cancer.

REVIEW OF SYSTEMS:

14-point review of systems performed and negative other than those reported in the interval history section.

Vital Signs:

no vitals obtained today as this was a telephone visit given the covid19 pandemic.

Physical Exam:

No physical exam was performed today due to today's consult being by telephone only.
KPS/ECOG PS determined by symptom assessment.

Data Review:

04-01-20

10.8
7.2 >—< 374
32.7

(ANC 4.0)

03-31-20

10.7
5.2 >—< 328
32.5

(ANC 2.7)

03-30-20

10.2
4.0 >—< 294
31.2

(ANC 1.8)

03-29-20

10.5
4.3 >—< 288
32.6

(ANC 2.7)

03-28-20

DATE: 04/13/2020

ACCT: 81704428

PROVIDER: Feldman, Darren (MD) 014357

11.5
6.2 >---< 323
35.7

(ANC 4.3)

03-28-20

9.4
4.8 >---< 241
29.3

(ANC 3.1)

03-27-20

9.3
7.4 >---< 244
29.3

(ANC 5.6)

03-26-20

9.4
8.6 >---< 247
28.5

(ANC 7.0)

03-26-20

9.7
10.2 >---< 227
30.7

(ANC 8.4)

03-25-20

10.0
10.6 >---< 201
31.4

(ANC 8.9)

03-24-20

9.0
2.1 >---< 171

DATE: 04/13/2020

ACCT: 81704428

PROVIDER: Feldman, Darren (MD) 014357

11.5
6.2 >---< 323
35.7

(ANC 4.3)

03-28-20

9.4
4.8 >---< 241
29.3

(ANC 3.1)

03-27-20

9.3
7.4 >---< 244
29.3

(ANC 5.6)

03-26-20

9.4
8.6 >---< 247
28.5

(ANC 7.0)

03-26-20

9.7
10.2 >---< 227
30.7

(ANC 8.4)

03-25-20

10.0
10.6 >---< 201
31.4

(ANC 8.9)

03-24-20

9.0
2.1 >---< 171

28.3

(ANC 0.9)

03-24-20

9.0
2.3 >---< 159
28.6

(ANC 0.9)

03-23-20

9.6
2.8 >---< 162
29.6

(ANC 1.3)

03-23-20

9.2
2.5 >---< 153
28.4

(ANC 1.2)

03-22-20

9.4
3.1 >---< 133
28.5

(ANC 1.8)

04-01-20

134 | 99 | 14
-----< 96
4.4 | 23 | 0.8

CA 9.5

04-01-20 LFT: AST 50<H>; ALT 74<H>; AlkP 107; Tbili 0.8; Dbili --; Protein 7.5; Alb 4.1

04-01 @ 05:36 Lipase 611

TUMOR MARKERS TREND
03-23-20 Beta-HCG <0.5, AFP -, LDH --

03-20-20 Beta-HCG 0.9, AFP --, LDH --
03-16-20 Beta-HCG 6.3, AFP 5.0, LDH 236
03-12-20 Beta-HCG 4.5, AFP 4.7, LDH 243
03-04-20 Beta-HCG 2.1, AFP 5.3, LDH 241

CT CH/ABD/PEL W/ CON

3/28/2020 CT of chest, abdomen, and pelvis

CLINICAL STATEMENT: Testicular cancer status post right nephrectomy, chemotherapy, and IVC ligation on March 18, 2020. Rising lipase and LFTs. COVID-19 positive.

TECHNIQUE: Multislice helical sections were obtained from the thoracic inlet to the pubic symphysis after oral and intravenous contrast administration.

RADIATION DOSE (DLP): 892 mGy-cm

COMPARISON: March 5, 2020.

CORRELATION: March 13, 2020 PET/CT.

FINDINGS:

LUNGS/AIRWAYS: New bilateral peribronchovascular-predominant groundglass and consolidative opacities involving all lobes. Bibasilar atelectasis.

PLEURA/PERICARDIUM: Small to moderate bilateral pleural effusions, right greater than left.

MEDIASTINUM/THORACIC NODES: No adenopathy.

HEPATOBILIARY: Unremarkable.

SPLEEN: Slightly decreased mild hepatomegaly, 15.6 cm, previously 16.1 cm in AP dimension.

PANCREAS: The pancreatic parenchyma is unremarkable with homogeneous density. No evidence of fluid collections within the anterior pararenal space.

ADRENAL GLANDS: Unremarkable.

KIDNEYS: Unremarkable.

ABDOMINOPELVIC

NODES: Status post interval retroperitoneal lymph node dissection and infrarenal IVC ligation, with resection of a large retroperitoneal mass. No new lymphadenopathy. Unchanged scattered prominent mesenteric lymph nodes.

PELVIC ORGANS: Unremarkable.

PERITONEUM/
MESENTERY/BOWEL: A few prominent loops of small bowel in the left

hemabiadmen, probably mild postoperative ileus. New small to moderate volume ascites. Small focus of free air in the anterior abdomen (2, 57), probably postoperative.
Retroperitoneal fluid is noted in the para aortic regions, probably postoperative. Lymphoceles can't be ruled out.
BONES/SOFT TISSUES: No suspicious osseous lesion. Unchanged probable bone island in the right sacral ala.

OTHER: Status post right orchiectomy.

IMPRESSION:

1. Since March 13, 2020 PET/CT, status post retroperitoneal lymph node dissection and infrarenal IVC ligation with resection of a large retroperitoneal mass. No CT evidence of pancreatitis or peripancreatic fluid collections.
2. New bilateral peribronchovascular-predominant groundglass and consolidative opacities, consistent with multifocal pneumonia, probably related to known COVID-19 infection.
3. New small to moderate bilateral pleural effusions.
4. New small to moderate volume ascites and retroperitoneal fluid, probably postoperative.

MRN: 38107187

Accession #: S20-19542

Date of Collection/Procedure/Outside Report: 3/18/2020

Date of Receipt: 3/18/2020

Date of Report: 3/31/2020

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Clinical Diagnosis & History:

Elevated AFP NSGCT, status post right orchiectomy 9/16/19 seminoma with focal scar. BEP x 3, EP x1.

Procedure: RPLND.

Specimens Submitted:

- 1: Para aortic lymph nodes
- 2: Right spermatic cord
- 3: Para caval lymph nodes
- 4: Intra caval tumor
- 5: Interaorta caval lymph node
- 6: Intra caval tumor thrombus
- 7: Precaval mass
- 8: Para-caval lymph node
- 9: Intra caval tumor #2
- 10: Inter iliac lymph node
- 11: Inter-caval thrombus (fs)
- 12: Inter caval thrombus #2
- 13: Vena cava

DIAGNOSIS:

1. Para aortic lymph nodes:
 - Ten benign lymph nodes (0/10).

2. Right spermatic cord:
 - No viable tumor identified.
 - Spermatic cord tissue with intravascular organized thrombi and macrophage accumulation.

3. Para caval lymph nodes:
 - Benign fibroadipose tissue in an entirely submitted specimen.

4. Intra caval tumor:
 - No viable tumor identified.
 - Fibrovascular and fibroadipose tissue with chronic inflammation and focal hemosiderin-laden macrophages.

5. Interaorta caval lymph node:
 - No viable tumor identified.
 - Seven lymph nodes identified; see comment.

Comment: One lymph node shows dense fibrosis/sclerosis and hemosiderin-laden macrophage accumulation, consistent with therapy effect.

6. Intra caval tumor thrombus:
 - No viable tumor identified.
 - Dense fibrotic/sclerotic tissue with recanalization and hemosiderin-laden macrophages, consistent with organized thrombus.

7. Precaval mass:
 - Residual teratoma and secondary somatic transformation/malignancy, in the form of rhabdomyosarcoma, associated with necrosis and macrophage accumulation; see comment.
 - Three discrete uninvolved lymph nodes are also identified.

Comment: In some regions of the residual tumor, rhabdomyoblastic-appearing cells are found in and amongst other teratomatous elements; however, in areas, sheets of rhabdomyoblastic cells occupy expansive fields (greater than 4x magnification), consistent with secondary somatic malignancy. The latter component is highlighted by strong positive staining with desmin and myogenin by immunohistochemistry. Selected slides of part seven of this case were reviewed with Drs. V. Reuter (GU Pathology) and M. Hameed (Soft Tissue Pathology), who concur with the diagnosis.

8. Para-caval lymph node:
 - Two benign lymph nodes (0/2).

9. Intra caval tumor #2:
 - No viable tumor identified.
 - Fibrovascular and fibroadipose tissue with chronic inflammation and focal hemosiderin-laden macrophages.

10. Inter iliac lymph node:
 - One benign lymph node (0/1).

11. Inter-caval thrombus (fs):
 - No viable tumor identified.
 - Dense fibrotic/sclerotic tissue with recanalization and hemosiderin-laden macrophages, consistent with organized thrombus.

12. Inter caval thrombus #2:
 - No viable tumor identified.
 - Dense fibrotic/sclerotic tissue with recanalization and hemosiderin-laden macrophages, consistent with organized thrombus

13. Vena cava:
 - Large caliber vessel with focal organized thrombus.

MRN: 38107187

Accession #: S20-16041

Date of Collection/Procedure/Outside Report: 3/3/2020

Date of Receipt: 3/3/2020

Date of Report: 3/4/2020

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Clinical Diagnosis & History:

Testis, Malignant Neoplasm. Confirm.

MSK Clinic Appointment Date: 03/05/2020

Specimens Submitted:

1: Testicle and spermatic cord, right; orchiectomy (201925249, 1, 10/3/19, 9 H&E AND 4 IMMUNOS)

DIAGNOSIS:

1. Testicle and spermatic cord, right; orchiectomy (201925249, 1, 10/3/19, 9 H&E AND 4 IMMUNOS):

Procedure:

Radical orchiectomy

Tumor Type:

Derived from germ cell neoplasia in situ (GCNIS)

Seminoma, Classic type

With focal scar, likely representing partially regressed

germ cell tumor

Tumor Focality:

Multiple nodules

Tumor Size:

Greatest dimension of main tumor mass: 2.5 cm

Germ cell neoplasia in situ (GCNIS):

Identified

Lymphovascular Invasion:

Suspicious for lymphovascular invasion

Rete Testis Invasion:
Identified
Stromal invasion

Hilar Soft Tissue Invasion:
Not identified

Tunica Invasion:
Not identified

Epididymis Invasion:
Not identified

Spermatic Cord Invasion:
Not identified

Scrotal Wall Invasion:
Not identified

Spermatic Cord Margin Invasion:
Not identified

Non-Neoplastic Testis:
Active spermatogenesis

Lymph Nodes:
No lymph nodes submitted or found

Pathologic Stage Classification (AJCC 7th Edition):

Primary Tumor (pT):

pT1: Tumor limited to the testis and epididymis without vascular/lymphatic invasion; tumor may invade into the tunica albuginea but not the tunica vaginalis

pNX: Regional lymph node cannot be assessed

Comment: Case also reviewed with Dr. Victor Reuter, who concurs.

Assessment:

24-year-old man from Israel with intermediate-risk, stage III-B (pT1 cN3 M0 S2) mixed NSGCT of the right testis with metastasis to large R retroperitoneal mass with invasion of IVC and AFP of 1204, who is s/p right orchiectomy on 10/3/19 and 3 cycles of BEP followed by 1 cycle of EP from 10/20/19 to 01/02/20 with normalization of AFP and minimal residual elevation of HCG. HCG which had normalized to 1.8 to 2.1 initially post-chemotherapy, subsequently increased to 6.3 on 3/16/20. On 3/18/20, he underwent PC-RPLND with IVC resection by Dr. Sheinfeld and Dr. Bains with pathology demonstrating the pre caval mass to contain teratoma with scattered foci of secondary somatic malignancy in the form of rhabdomyosarcoma. There was no evidence of viable GCT but his HCG nevertheless normalized postop. His postop course was complicated by covid19 pneumonia with elevated LFTs and lipase, likely also from covid19. He recovered and was discharged on 4/1/20. He is now referred by Dr. Sheinfeld for initial consultation and discussion of management options/recommendations.. Today's encounter was conducted by phone in lieu of an in-person visit in light of the covid19 pandemic. Dr. Zelefsky served as a Hebrew-English interpreter for the encounter.

I had a long discussion with the patient and his brother today, reviewing his diagnosis and treatment course in detail. I reviewed the biology of GCT and the pathogenesis of secondary somatic malignancy arising from teratoma. We discussed his pathology from the RPLND. I indicated that our standard approach to secondary somatic malignancy is to treat it like a de novo form of the same histology. As such, in his case we would approach this similar to how we would approach a de novo rhabdomyosarcoma.

I explained that fully resected rhabdomyosarcoma is typically treated with adjuvant chemotherapy with a regimen consisting of cyclophosphamide, vincristine and either adriamycin or actinomycin-D. This regimen is referred to as VAC when actinomycin-D is used or CAV when

adriamycin is used. I indicated that I do not typically treat sarcomas and that we have a sarcoma service at MSKCC who specializes only in sarcoma diagnosis and management. I feel that he would be best served by a consultation with an expert in rhabdomyosarcoma management. I indicated that I had discussed his case with Dr. Bill Tap, the chief of the Sarcoma Service and he felt that the patient would benefit from adjuvant chemotherapy, most likely with CAV for approximately 6 cycles, administered every 3-4 weeks. He offered to consult on the patient or have one of his colleagues do so and I will make the referral. I described what a cycle of CAV would consist of to him and his brother and some of the potential toxicities but asked him to review these in more detail with Dr. Tap or one of his colleagues.

The patient had questions about whether he should receive this regimen in Israel or the United States and when it should start. Ideally, he should initiate treatment within about 2 months of surgery but he would have to be fully recovered first. He would need his LFTs and lipase rechecked. He should also have HCG, AFP, and LDH repeated. If he is to receive adriamycin, he would need an echocardiogram. I indicated that it may be best for him to receive treatment in Israel given the duration of treatment may be as long as 6 months. He will discuss these issues further with Dr. Tap and his family.

All of the patient's and his family's questions were answered today to their apparent full satisfaction and understanding. They expressed appreciation for the consultation.

Plan:

Intermediate-risk, stage III-B (pT1 cN3 M0 S2) mixed NSGCT of the right testis with metastasis to large R retroperitoneal mass and AFP >1200 s/p right orchiectomy on 10/3/19, BEPx3 followed by EPx1 from 10/20/19 to 1/2/20, and PC-RPLND plus IVC resection by Dr. Sheinfeld/Bains on 3/18/20 revealing teratoma with secondary somatic malignancy in the form of rhabdomyosarcoma.

- Discussed general paradigm of treatment of secondary somatic malignancy and recommendation for adjuvant chemotherapy within 2 months of surgery pending adequate recovery
- Referral to Dr. Tap or other expert on the sarcoma service for specifics of adjuvant chemotherapy regimen including drugs and cycles but likely VAC or CAV x 6
- Will need repeat HCG, AFP, LDH, lipase, and LFTs prior to start
- Would need TTE if to receive adriamycin
- He will further discuss his decision to receive chemotherapy at MSKCC vs. Israel with Dr. Tap and his family as well as timing of such treatment.

Time Spent:

A total of 60 minutes were spent face-to-face with the patient. More than half of this time was spent in counseling the patient and/or coordinating their care as described above.

Fax to External MDs:

Fax/External CC: External provider info is not available

Internal CC:

Sheinfeld, Joel (Attending). Zelefsky, Michael (Attending). Tap, William Douglas (Attending).

Electronic Signatures:

Feldman, Darren (MD Attending) (Signed 04/13/2020 23:26)

Authored: SERVICE, CHIEF COMPLAINT, VISIT DETAILS, HISTORY OF PRESENT ILLNESS, MEDICATIONS, ALLERGIES, ONCOLOGY HISTORY, PMSH, REVIEW OF SYSTEMS, VITAL SIGNS, PHYSICAL EXAM, DATA REVIEW, MEDICAL DECISION MAKING, TIME SPENT, ATTESTATION STATEMENT, INTERNAL/EXTERNAL CC

Last Updated: 04/13/2020 23:26 by Feldman, Darren (MD Attending)

DATE: 04/01/2020

ACCT: 21328208

PROVIDER: Sheinfeld, Joel (MD) 002857

Last Updated: 04/22/2020 08:47 AM
Service Date: 04/01/2020 10:36 AM

Service:

- Urology.

Admission Diagnosis:

- Metastatic mixed right non-seminomatous germ cell tumor.

Admission Date:

- 03/18/2020.

Discharge Date:

- 04/01/2020.

Reason for Admission:

- Admitted for scheduled surgery.

Brief History:

- The patient is a 24 years old male who developed right hip and back pain in 4/2019 which progressively worsened in 9/2019. The patient was found to have a right testis mass and underwent scrotal ultrasound on 9/16/2019 which showed multiple hypoechoic processes in the right testis suspicious for malignancy. Baseline tumor markers were HCG 476, AFP 1104, and LDH 434. CT chest, abdomen and pelvis on 9/22/2019 showed a large retroperitoneal mass, partly vascular measuring 9 x 8.5cm without a clear plane of separation from the IVC. The patient underwent right radical inguinal orchiectomy on 10/03/2019; pathology showed multifocal seminoma with focal scar, likely representing partially regressed germ cell tumor. For intermediate-risk, stage III-B mixed NSGCT (seminoma + elevated AFP), he received chemotherapy consisting of 3 cycles of BEP (Bleomycin, Etoposide and Cisplatin) followed by 1 cycle of Etoposide and Cisplatin from 10/20/2019 to 01/02/2020. His peak HCG was 1751 and peak AFP was 3044. Post-chemotherapy, CT head, neck, and chest, abdomen and pelvis on 2/5/2020 demonstrated a slight decrease in the size of the retroperitoneal mass to 9.5 x 7.2 x 6.6cm with continued narrowing of the IVC. Pathology slides were reviewed at MSKCC on 3/3/2020 which confirmed the diagnosis. CT of chest, abdomen, and pelvis on 3/5/2020 demonstrated an unchanged retroperitoneal precaval/interaortocaval mass measuring 6.8 x 5.2 x 10cm with mass effect and compression of the IVC, unchanged encasement of the IMA, proximal R common iliac artery, and abutment of the abdominal aorta by the mass and scattered subcentimeter short axis mesenteric nodes were unchanged at 1.0 x 0.7cm. Repeat HCG on 3/12/2020 demonstrated slight rise in HCG to 4.5 with stable AFP of 4.7 and LDH 243. PET scan on 3/13/2020 demonstrated a mildly FDG-avid aortocaval mass measuring 6.8 x 5.2cm compressing the IVC with SUV 8.0 and no other sites of metastasis or FDG-avidity noted. On 3/16/2020, HCG was 6.3 with AFP 5.0 and LDH 236. The patient was planned for surgical intervention on 3/18/2020

The patient was admitted for scheduled surgery.

The patient has past medical history of hyperpigmentation to skin on back and abdomen secondary to chemotherapy and anxiety.

ALLERGIES:

- No known allergies.

Significant Findings Upon Admission:

- Physical Examination: Within normal limits except Palpable right sided abdominal mass, feels mobile.
- Laboratory Data Values: Within normal limits except Abs Neut: 03/18/2020 10.6(H), Carboxyhemoglobin: 03/18/2020 2.1(H), Bicarb (Calculated): 03/18/2020 19.0(L), HCT:

03/18/2020 32.7(L), Hematocrit (ABG): 03/18/2020 26(L), HGB: 03/18/2020 11.0(L), Hemoglobin (Chem): 03/18/2020 11.2(L), Hemoglobin (Chem): 03/18/2020 11.2(L), Ionized Calcium: 03/18/2020 5.4(H), Lactic Acid, Arterial: 03/18/2020 4.1(HH), Lymph: 03/18/2020 7.3(L), Neutrophil: 03/18/2020 90.2(H), Oxyhemoglobin: 03/18/2020 97.6(H), O2 Sat.: 03/18/2020 100.0(H), PCO2: 03/18/2020 34.0(L), pH: 03/18/2020 7.330(L), PO2: 03/18/2020 178.0(H), RBC: 03/18/2020 3.84(L), Hemoglobin, Total: 03/18/2020 10.1(L), WBC: 03/18/2020 11.8(H), Chloride, Whole Blood: 03/18/2020 110(H), Glucose, Whole Blood: 03/18/2020 228(H), Potassium, Whole Blood: 03/18/2020 5.2(H), Sodium, Whole Blood: 03/18/2020 133(L).

- Medical Imaging: CXR: New endotracheal tube with tip 6.1 cm above the carina, new enteric tube in satisfactory position and clear lungs.

Operative Procedures:

- Surgery: 3/18/2020: Dr. Shenfield performed bilateral post-chemotherapy retroperitoneal lymph node dissection, resection of retroperitoneal mass greater than 10cm, and resection of inferior vena cava and repair of serosa of duodenum.
- Pathology: 3/18/2020: Accession #: S20-19542:
 1. Right spermatic cord: No viable tumor identified, spermatic cord tissue with intravascular organized thrombi and macrophage accumulation.
 2. Intra caval tumor: No viable tumor identified, fibrovascular and fibroadipose tissue with chronic inflammation and focal hemosiderin-laden macrophages.
 3. Interaorta caval lymph node: No viable tumor identified, seven lymph nodes identified
 4. Intra caval tumor thrombus: No viable tumor identified, dense fibrotic/sclerotic tissue with recanalization and hemosiderin-laden macrophages, consistent with organized thrombus.
 5. Precaval mass: Residual teratoma and secondary somatic transformation/malignancy, in the form of rhabdomyosarcoma, associated with necrosis and macrophage accumulation
 6. Intra caval tumor #2: No viable tumor identified, fibrovascular and fibroadipose tissue with chronic inflammation and focal hemosiderin-laden macrophages.
 7. Inter-caval thrombus (fs): No viable tumor identified, dense fibrotic/sclerotic tissue with recanalization and hemosiderin-laden macrophages, consistent with organized thrombus.
 8. Inter caval thrombus #2: No viable tumor identified, dense fibrotic/sclerotic tissue with recanalization and hemosiderin-laden macrophages, consistent with organized thrombus
 9. Vena cava: Large caliber vessel with focal organized thrombus.
 10. Rest other specimen remained benign.

Other Significant Results:

- Radiology: 3/28/2020: CT of chest, abdomen, and pelvis: Status post retroperitoneal lymph node dissection and infrarenal IVC ligation with resection of a large retroperitoneal mass, no CT evidence of pancreatitis or peripancreatic fluid collections, new bilateral peribronchovascular-predominant groundglass and consolidative opacities, consistent with multifocal pneumonia, probably related to known COVID-19 infection, new small to moderate bilateral pleural effusions, new small to moderate volume ascites and retroperitoneal fluid, probably postoperative.
- Positive Cultures: 3/24/2020: COVID-19 Qualitative RNA culture positive.

Course and Other Treatment:

- Routine post-operative care was rendered. Pain was well controlled with Hydromorphone IV PCA which was later transitioned to per oral pain medications. Foley catheter in place, care was rendered. Nasogastric tube in place, care was rendered. Incentive spirometry was encouraged. Nebulizer therapy was started.

ACE bandages were wrapped around bilateral legs and leg elevation was encouraged.

The patient was noted to be hypotensive. 1 liter Albumin was given.

Nasogastric tube was discontinued on 3/20/2020.

The patient reported back and incisional pain. Ketorolac injection was given.

The patient reported nausea which was later resolved.

On 3/24/2020, COVID-19 Qualitative RNA culture came out to be positive. Droplet and isolation precautions were rendered.

The patient received Filgrastim subcutaneous on 3/24/2020.

Sepsis alert was triggered on 3/26/2020 due to fever to 39C, heart rate- 129 and respiratory rate-22. The patient was pancultured. Tylenol was started. Sepsis screening was continued.

The patient reported loose stools. Bowel regimen was kept on hold.

Foley catheter was discontinued on 3/26/2020.

The patient received multiple units of pRBC during the course as needed.

PT/OT sessions were encouraged. Ambulation was encouraged. Diet was advanced as tolerated. The patient discharged home in stable condition.

Discharge Status:

- Patient Condition: Stable.
- Medications: As prescribed.
- Diet: As instructed.
- Physical Activity: As instructed.
- Other: Report: fever, chills, pain, bleeding, nausea/vomiting, constipation/diarrhea, inability to take PO and decreased urine output.
- Follow up with primary physician: Dr. Joel Sheinfeld.

Discharge Diagnosis:

• Metastatic mixed right non-seminomatous germ cell tumor status post-surgery
COVID-19 Qualitative RNA culture positive

Postoperative hypotension

Postoperative back and incisional pain

Postoperative nausea

Postoperative fever

Postoperative tachycardia

Postoperative tachypnea

Postoperative loose stool

Postoperative multifocal pneumonia, probably related to known COVID-19 infection

Hyperpigmentation to skin on back and abdomen secondary to chemotherapy.

Fax to External MDs:

Fax/External CC: External provider info is not available

Electronic Signatures:

Mehra, Priyanka (CIC) (Signed 04/21/2020 06:26)

*Authored: Department/Service, Admission Diagnosis, Admission Date, Discharge Date,
Reason for Admission, Brief History, Allergies, Significant Findings Upon Admission,
Procedures, Course and Other Treatment, Discharge Status, Discharge Diagnosis,
Internal/External CC*

Sheinfeld, Joel (MD Attending) (Signed 04/22/2020 06:47)

DATE: 04/01/2020

ACCT: 21328208

PROVIDER: Sheinfeld, Joel (MD) 002857

Entered: Admission Date, Discharge Date, Attending Statement

Authored: Department/Service, Admission Diagnosis, Admission Date, Discharge Date, Reason for Admission, Brief History, Allergies, Significant Findings Upon Admission, Procedures, Course and Other Treatment, Discharge Status, Discharge Diagnosis, Attending Statement, Internal/External CC

Last Updated: 04/22/2020 06:47 by Sheinfeld, Joel (MD Attending)

MRN: 38107187
DOB: 11/12/1995 Sex: M
Ordered by: JOEL SHEINFELD, MD
Procedure: CT CH/ABD/PEL W/ CON
PRID #: R33758796

Date of Service: 03/05/2020
Pt Loc: MSK
Date of Report: 03/06/2020 05:38 PM
Account: 81116084

FINAL REPORT

3/5/2020 CT of chest, abdomen, and pelvis

CLINICAL STATEMENT: Nonseminomatous testicular germ cell tumor with elevated AFP and retroperitoneal mass. Post right orchectomy 9/16/2019 and 4 cycles of BEP chemotherapy. Evaluate extent of disease prior to retroperitoneal lymph node dissection.

TECHNIQUE: Multislice helical sections were obtained from the thoracic inlet to the pubic symphysis after oral and intravenous contrast administration.

RADIATION DOSE (DLP): 834 mGy-cm

COMPARISON: Outside CT February 5, 2020

CORRELATION: Outside CT September 22, 2019.

FINDINGS:

LUNGS/AIRWAYS: No suspicious pulmonary nodules.

PLEURA/PERICARDIUM: No effusion.

MEDIASTINUM/THORACIC NODES: No adenopathy. Redemonstrated thymic hyperplasia/rebound.

HEPATOBILIARY: Unremarkable.

SPLEEN: Unchanged mild splenomegaly, measuring 16.1 cm in anteroposterior dimension.

PANCREAS: Unremarkable.

ADRENAL GLANDS: Unremarkable.

KIDNEYS: Unremarkable.

ABDOMINOPELVIC NODES: Unchanged retroperitoneal precaval/aortocaval mass measuring 6.8 x 5.2 x 1.0 cm with mass effect and Diag.
Rad.

** Continued on next page **

Account: 81116084
Physician: SHEINFELD, JOEL

----- Page 2 of 2 -----
compression of the inferior vena cava, however decreased in size if compared to more remote prior exam September 22, 2019, then measuring 8.8 x 7.9 x 10.1 cm. Unchanged encasement of the inferior mesenteric artery, proximal right common iliac artery and abutment of the abdominal aorta by the mass. No new adenopathy.

Scattered subcentimeter short axis mesenteric nodes are unchanged, measuring up to 1.0 x 0.7 cm.

PELVIC ORGANS: Unremarkable.

PERITONEUM/

MESENTERY/BOWEL: Scattered subcentimeter short axis mesenteric nodes are unchanged, measuring up to 1.0 x 0.7 cm. No bowel obstruction. No ascites.

BONES/SOFT TISSUES: No suspicious osseous lesion. Few nonspecific punctate and linear sclerotic foci are unchanged, for example in the left glenoid and right sacral ala.

OTHER: Right orchiectomy.

IMPRESSION:

1. Since February 5, 2020, unchanged right retroperitoneal mass, decreased in size if compared with a more remote prior exam September 22, 2019.
2. No new suspicious findings.

FINAL REPORT

Dictated By:

Staff Radiologist: SOLEEN GHAFOOR, MD

I attest that the above IMPRESSION is based upon my personal examination of the entire imaging study and that I have reviewed and approved this report.

The following terms are used in MSKCC Radiology reports
(except those of breast imaging studies)
to convey the radiologist's level of certainty for a given interpretation.

Consistent with	> 90%
Suspicious for/Probable/Probably	approx 75%
Possible/Possibly	approx 50%
Less likely	approx 25%
Unlikely	< 10%

Electronically Signed By: SOLEEN GHAFOOR , MD (Mar 6 2020 5:38:08:403PM)

ACC NUMBER: R33758796

MEDICAL RECORD NUMBER: 38107187

Diag.
Rad.

** End of Report **

Gender: Male
DOB: 11/12/1995

Visit #: 81092468
Physician: ZELEFSKY,MICHAEL

Chemistry

Order Name	Collected Date/Time	Received Date/Time	Accession Number
Comprehensive Metabolic Panel Plasma (PCMP) ⁽¹⁾	3/4/2020 11:02 EST	3/4/2020 11:17 EST	20-064-02781
Comprehensive Metabolic Panel Plasma (PCMP) ⁽²⁾	3/4/2020 11:02 EST		20-064-02781
Test	Result	Units	Reference Range
ALT PI ⁽¹⁾	36 ^{i1 *1}	U/L	[<=55]
Albumin PI ⁽¹⁾	5.1 ^{H *1}	g/dL	[3.8-5.0]
Alk Phos PI ⁽¹⁾	94 ^{*1}	U/L	[<=130]
AST PI ⁽¹⁾	34 ^{*1}	U/L	[<=37]
Bilirubin Tot PI ⁽¹⁾	0.7 ^{f1 *1}	mg/dL	[<=1.2]
BUN PI ⁽¹⁾	16 ^{*1}	mg/dL	[6-20]
Calcium PI ⁽¹⁾	10.2 ^{*1}	mg/dL	[8.5-10.5]
Chloride PI ⁽¹⁾	102 ^{*1}	mEq/L	[98-109]
CO2 PI ⁽¹⁾	27 ^{*1}	mEq/L	[18-29]
Creatinine PI ⁽¹⁾	1.0 ^{*1}	mg/dL	[0.6-1.3]
eGFR AA PL ⁽¹⁾	>=60 ^{*1}	mL/min/1.73m ²	[>=60]
eGFR NonAA PI ⁽¹⁾	>=60 ^{f2 *1}	mL/min/1.73m ²	[>=60]
Glucose PI ⁽¹⁾	104 ^{*1}	mg/dL	[70-140]
Potassium PI ⁽¹⁾	4.2 ^{f1 *1}	mEq/L	[3.3-4.9]
Protein Tot PI ⁽¹⁾	8.7 ^{H *1}	g/dL	[6.3-8.5]
Sodium PI ⁽¹⁾	141 ^{*1}	mEq/L	[133-143]
Anion Gap PI ⁽²⁾	12 ^{*1}	mEq/L	[8-16]

Result Comments

f1: Bilirubin Tot Pl, Potassium Pl
Slight hemolysis.

f2: eGFR NonAA Pl
The CKD-EPI equation was used to calculate the estimated GFR, and is not adjusted for extreme body surface area.

The CKD-EPI equation has not been validated for children less than 18 years, pregnant women, ethnic groups other than Caucasians or African Americans, or the elderly.

Estimated GFR is valid only in steady state conditions.

LEGEND: C =Corrected, @ =Abnormal, CV =Critical, L =Low, H =High, f =Result Comment, i =interp Data

All testing performed at the header location unless indicated on the report.

Gender: Male
DOB: 11/12/1995

Visit#: 81092468
Physician: ZELEFSKY,MICHAEL

Chemistry

Result Comments

f2: eGFR NonAA Pl
Ref: Levey AS, Stevens LA et al. A new Equation to Estimate Glomerular Filtration Rate. Ann Intern Med. 2009; 150:604-612.

Order Name	Collected Date/Time	Received Date/Time	Accession Number
Lactate Dehydrogenase (LDH) (LDH)	3/4/2020 11:02 EST	3/4/2020 11:17 EST	20-064-02781
Test	Result	Units	Reference Range
LDH	241 *1	U/L	[130-250]

Interpretive Data

i1: ALT Pl
Recommended healthy ALT level

Males: 29-33 U/L
Females: 19-25 U/L

American College of Gastroenterology (ACG) Clinical Guideline: Evaluation of abnormal Liver Chemistries. 2017

Performing Locations

*1: This test was performed at:
MHRRRL Lab, Dr. Melissa S. Pessin, MD PhD, Director, CLIA: 33D2127929, 1275 York Ave,
New York, NY, 10065-0000, US

LEGEND: C =Corrected, @ =Abnormal, CV =Critical, L =Low, H =High, f =Result Comment, i =interp Data

All testing performed at the header location unless indicated on the report.

Gender: Male
DOB: 11/12/1995

Visit#: 81092468
Physician: ZELEFSKY,MICHAEL

Hematology

Orderable Name	Collected Date/Time	Received Date/Time	Accession Number
.Automated Differential (CBCP)	3/4/2020 11:02 EST	3/4/2020 11:16 EST	20-064-02781

Test	Result	Units	Reference Range	Report Date/Time
Neutrophil	55.2 ^{**1}	%	[32.5-74.8]	3/4/2020 11:19 EST
Imm Granulocyte	0.2 ^{i1**1}	%	[0.0-0.6]	3/4/2020 11:19 EST
Lymphocyte	33.7 ^{**1}	%	[12.2-47.4]	3/4/2020 11:19 EST
Monocytes	8.2 ^{**1}	%	[0.0-12.3]	3/4/2020 11:19 EST
Eosinophil	2.1 ^{**1}	%	[0.0-4.9]	3/4/2020 11:19 EST
Basophil	0.6 ^{**1}	%	[0.0-1.5]	3/4/2020 11:19 EST
Abs Neutrophil	2.8 ^{**1}	K/mcL	[1.5-7.5]	3/4/2020 11:19 EST
Abs Imm Gran	0.0 ^{**1}	K/mcL	[0.0-0.1]	3/4/2020 11:19 EST
Abs Lymphocyte	1.7 ^{**1}	K/mcL	[0.9-3.2]	3/4/2020 11:19 EST
Abs Monocyte	0.4 ^{**1}	K/mcL	[0.0-1.3]	3/4/2020 11:19 EST
Abs Eosinophil	0.1 ^{**1}	K/mcL	[0.0-0.7]	3/4/2020 11:19 EST
Abs Basophil	0.0 ^{**1}	K/mcL	[0.0-0.2]	3/4/2020 11:19 EST
NRBC	0.0 ^{**1}	%		3/4/2020 11:19 EST

Orderable Name	Collected Date/Time	Received Date/Time	Accession Number
.CBC with Automated Diff (CBCP)	3/4/2020 11:02 EST	3/4/2020 11:16 EST	20-064-02781

Test	Result	Units	Reference Range	Report Date/Time
WBC	5.1 ^{**1}	K/mcL	[4.0-11.0]	3/4/2020 11:19 EST
RBC	5.22 ^{**1}	M/mcL	[3.95-5.54]	3/4/2020 11:19 EST
HGB	15.2 ^{**1}	g/dL	[12.5-16.2]	3/4/2020 11:19 EST
HCT	44.7 ^{**1}	%	[37.5-49.3]	3/4/2020 11:19 EST
MCV	86 ^{**1}	fL	[80-98]	3/4/2020 11:19 EST
MCH	29.1 ^{**1}	pg	[27.0-33.0]	3/4/2020 11:19 EST
MCHC	34.0 ^{**1}	g/dL	[31.0-36.5]	3/4/2020 11:19 EST
RDW	12.7 ^{**1}	%	[12.2-15.1]	3/4/2020 11:19 EST
Platelet Count	154 ^{L**1}	K/mcL	[160-400]	3/4/2020 11:19 EST
Diff Type	Automated Diff ^{f1**1}			3/4/2020 11:19 EST

LEGEND: C =Corrected, @ =Abnormal, CV =Critical, L =Low, H =High, f =Result Comment, i =interp Data

All testing performed at the header location unless indicated on the report.

Gender: Male
DOB: 11/12/1995

Visit#: 81092468
Physician: ZELEFSKY,MICHAEL

Hematology

Result Comments

f1: Diff Type
Due to data rounding to one significant digit, absolute leukocyte counts may not add up to total WBC, the ANC might be slightly higher than the total WBC, and relative leukocyte counts may not add to 100%.

Interpretive Data

i1: Imm Granulocyte
Immature Granulocytes include metamyelocytes, myelocytes and promyelocytes.

Performing Locations

*1: This test was performed at:
MHRRL Lab, Dr. Melissa S. Pessin, MD PhD, Director, CLIA: 33D2127929, 1275 York Ave,
New York, NY, 10065-0000, US

LEGEND: C =Corrected, @ =Abnormal, CV =Critical, L =Low, H =High, f =Result Comment, i =interp Data

All testing performed at the header location unless indicated on the report.

DATE: 03/05/2020

ACCT: 81066551

PROVIDER: Sheinfeld, Joel (MD) 002857

Last Updated: 03/05/2020 01:46 PM
Service Date: 03/05/2020 09:51 AM

Chief Complaint:

- NSGCT s/p BEPx4 with RP mass.

HPI:

24yo M here from Israel with hx NS GCT (seminoma w/ elevated AFP) s/p R orchiectomy 9/16/19 and s/p BEP x4 presents to clinic with his brother for surgical consultation. Pt has received all treatment to date in Israel. Pt reports he started to experience R hip and back pain around April 2019. In September he had a complete work-up and was found to have a R testis mass. Pt underwent Right radical orchiectomy 9/16/19. Pre-orchiectomy STMs were significantly elevated: HCG 476, AFP 1104, LDH 434. Pathology reviewed internally, reveals seminoma with focal scar, no lymphovascular invasion. Pt had CT CAP 9/22/19 which showed large retroperitoneal mass, partly vascular, diameter 9 x 8.5cm, without a clear plane of separation from IVC. STMs remained elevated following orchiectomy: HCG 642, AFP 1244

Pt underwent BEP x4 cycles, with the 4th cycle of bleomycin omitted. Last dose chemo given 12/12/19.

CT CAP 2/5/20 post-chemotherapy shows retroperitoneal mass in the infra-renal area, narrowing the IVC. Mass is hypodense with blood vessels inside it. Measures 95 x 72 x 66mm.

STMs drawn yesterday 3/4/20: AFP 5.3, LDH 241, HCG 2.1

Pt here today from Israel to discuss RPLND with Dr. Sheinfeld. Currently, pt has mild back pain. Reports pain has improved significantly since prior to chemotherapy. Pt denies other symptoms - no cough, sob, unintentional weight loss, gynecomastia. No hx cryptorchidism. No Fhx testis cancer.

Pmhx: Mumps as a child, with involvement of one testicle

Pshx: R orchiectomy 9/16/19

Allergies: none

Social: Married with x1 child, sperm banked prior to chemo, no etoh, never smoker

Fhx: No hx cancer.

Presenting Symptoms:

Genitourinary:

- TESTICLE HARDNESS: Not Present.
- SWELLING (MASS/NODULE): Not Present.
- TESTICULAR PAIN: Not Present.
- ABDOMINAL PAIN: Present.
- INFERTILITY Not Present.

Breast:

- GYNECOMASTIA: Not Present.
- NIPPLE TENDERNESS: Not Present.
- NIPPLE MASS: Not Present.

Head & Neck:

- NECK MASS: Not Present.

Musculoskeletal:

- BACK PAIN: Present.

Cardiovascular:

- COUGH: Not Present.

General:

- WEIGHT LOSS: Not Present.

Diagnostics:**Initial Diagnosis:**

- Dx Date: 9/16/2019.
- Method of Initial Diagnosis: Radical Orchiectomy.
- Site of Initial Diagnosis: Right Testis.

Pathology:

- Reviewed with MSKCC Pathologist. Orchiectomy Date: 9/16/2019.
- Seminoma.

Labs:

- Labs

Beta-HCG, Tumor Marker

Date	Value
03/04/2020	2.1

Alphafetoprotein (AFP)

Date	Value
03/04/2020	5.3

Family History:

- No known family history of cancer.

Social History:

- Occupation: Student in Israel
- Social History Marital Status: Married
- # of Children: 1
- Smoking Status: Never Smoker
- Illicit Drug Usage: None

Review of Systems:**General:**

- FEVER: no.

Neurologic:

- HEADACHE: no.
- FOCAL WEAKNESS: no.

Eyes:

- VISUAL PROBLEMS: no.

Cardiovascular:

- PALPITATIONS: no.
- ANGINA: no.

Respiratory:

- COUGH: No.
- SHORTNESS OF BREATH: No.
- HEMOPTYSIS: No.

Gastrointestinal:

- NAUSEA: no.

- VOMITING: no.
- ABDOMINAL PAIN: no.
- RECTAL BLEEDING: no.

Physical Exam:

- General: Well developed/Well Nourished, No Acute Distress and Alert & Oriented.
- Nodes (normal): Supraclavicular, Axillary and Cervical.
- Respiratory: Clear to Percussion & Auscultation.
- Cardiovascular: No Edema.
- Comments: Palpable right sided abdominal mass, feels mobile.
- Testes: No Tenderness or Masses.
- Comments: s/p R orch, L testis is normal with no masses.

2002 Clinical TNM Stage:

- II: C (> 5cm).

Impression & Plan:

- 24yo M here from Israel with CSIIC NSGCT now s/p BEP x4 (4th cycle bleomycin omitted), normalized STMs, and most recent scan showing shrunken right infra-renal RP mass, although still very large ~9cm. Retroperitoneal Lymph Node Dissection informed consent discussion was held with patient and his brother, with interpretation using phone interpreter and Dr. Zelefsky. Risks of surgery were communicated to patient, including bleeding, life-threatening bleeding, ascites, retrograde ejaculation, possible loss of right kidney, possible bowel resection, paralysis, and death. Patient demonstrated understanding of risks, asked appropriate questions, and signed informed consent. RPLND scheduled for March 18th, 2020.
 - Pre-surgical testing today
 - Brain MRI in 7 days
 - STMs in 7 days
 - RPLND scheduled for 3/18/20.

Attestation Statement:

NP/PA STATEMENT: This is a shared visit with the Attending as indicated in the signature line.

Attending Summary: CHIEF COMPLAINT: NSGCT s/p BEPx4 with RP mass

HPI: Moshe Aizenshtat is a 24-year-old male with a diagnosis of NSGCT s/p BEPx4 with RP mass.

Patient is seen today at MSKCC for consultation and possible management.

PMHx, PSHx, Family and Social Hx and ROS: I have reviewed and confirmed the PMHx, PSHx, Social and Family Hx and ROS as documented above.

PHYSICAL EXAM:

- GENERAL: Well developed/Well nourished. No acute distress, alert and oriented
- NODES: Supraclavicular, axillary, cervical and groin
- RESPIRATORY: Clear to percussion and auscultation
- CARDIOVASCULAR: No edema, regular rate and rhythm and no murmurs
- ABDOMEN: Soft non-tender, normal bowel sounds, no palpable mass, no hepatosplenomegaly and no ascites
- TESTES: No tenderness or masses, normal size, no hydrocele, no varicocele and normal scrotal wall.
- MUSCULOSKELETAL: No cord, no calf tenderness, no leg swelling and normal pedal pulses
- NEUROLOGY: Normal motor function and normal sensation
- BREAST: Normal breast exam, no gynecomastia and no nipple tenderness/discharge.

ASSESSMENT AND PLAN: As above. Patient who has completed 4 rounds of chemotherapy for bulky metastatic germ cell tumor the primary tumor showed seminoma however the alpha-fetoprotein was elevated of thus he is considered a non-seminoma. His tumor markers have normalized there has been some reduction in the volume of his disease nevertheless there is still bulky pre-caval an interaortocaval mass that discussion with the patient and his brother is done with the assistance of Dr. Zaleski from radiation oncology who is fluent in Hebrew as well as translator Iris we believe the patient would benefit from retroperitoneal lymph node dissection given the size location and anticipated desmoplastic reaction we discussed the significant technical demands possible complications including but not restricted the bleeding life-threatening bleeding infection risk of anesthesia PE injury to adjacent organs ascites chylous ascites retrograde ejaculation bowel obstruction possibility of benign pathology around 50% was discussed the various histologic findings were discussed I have shown the patient and his brother the actual films so they have a better understanding of the technical challenges and risks. The possibility of right nephrectomy and possibility of bowel resection were discussed many questions were answered informed consent was signed

This is a shared visit with NP/PA .

Fax to External MDs:

Fax/External CC: External provider info is not available

Electronic Signatures:

Greenberg, Molly (PA) (Signed 03/05/2020 12:41)

Authored: Chief Complaint, History of Present Illness, Clinical History, Presenting Symptoms, Diagnostics, Family & Social History, Review of Systems, Physical Exam, 2002 Clinical Stage TNM, Impression and Plan, Attestation, Internal & External CC

Sheinfeld, Joel (MD Attending) (Signed 03/05/2020 13:46)

Authored: Attestation

Co-Signer: Chief Complaint, History of Present Illness, Clinical History, Presenting Symptoms, Diagnostics, Family & Social History, Review of Systems, Physical Exam, 2002 Clinical Stage TNM, Impression and Plan, Attestation, Internal & External CC

Last Updated: 03/05/2020 13:46 by Sheinfeld, Joel (MD Attending)

Height: **65.2** in Weight: **165** lb BMI: **27.3** Diagnosis: **1: Adverse effect of antineoplastic and immunosuppressive drugs sequela**

Room: **1275 - A350**

Technologist: **Gary Hightower, CPFT**

Ordering MD: **Joel Sheinfeld, M.D.**

Physician Interpretation

Interpretation:

Normal total lung capacity and vital capacity.

Decreased residual volume.

RV/TLC: Decreased.

FVC: Normal.

FEV-1: Normal.

FEV1/FVC: Normal.

Response to aerosolized bronchodilator: No trial given.

Flow Volume Loop: Normal pattern.

Diffusing Capacity (unadjusted for Hgb): Normal.

Impression:

Normal study.

Technologist Comments

Good patient effort. Fair comprehension and coordination. Hgb from CBC at hh:mm on 3/4/2020 was 15.2; as per MSKCC pulmonary laboratories policy, DLco adjustment was not done.

Patient: Aizenshtat, Moshe
Test Date: 3/5/2020

MRN: 38107187
Page: 1 of 3

Signed by: Jean T. Santamauro, M.D.
Interpretation Date: 3/9/2020 Time: 12:43

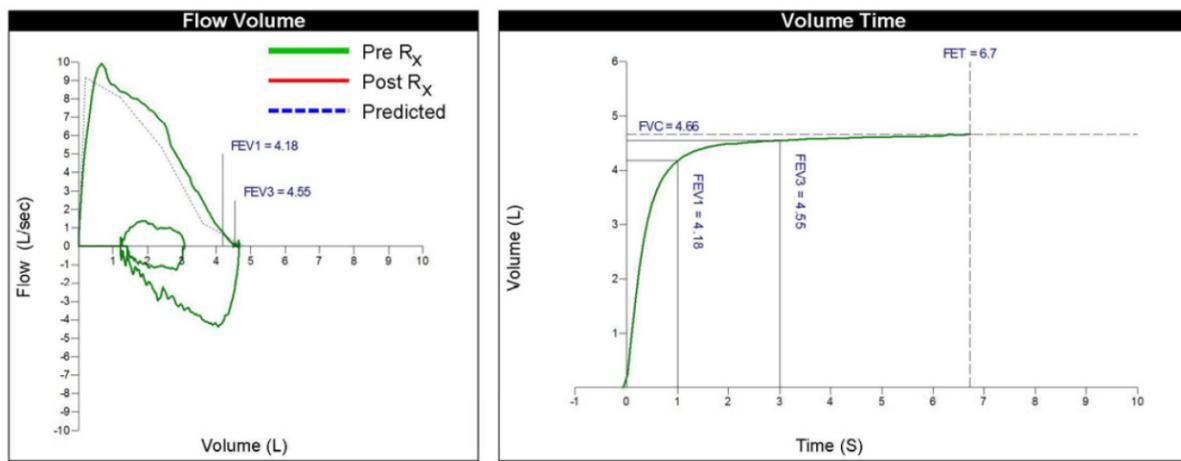


Lung Volumes (Box)		Predicted Range		Pre Bronchodilator	
		Mean	95%	Actual	% Pred
TLC	L	6.16	5.01	5.59	91
VC	L	4.80	3.99	4.66	97
RV	L	1.47	0.79	0.93	63
IC	L	3.27	—	2.91	89
FRC	L	3.00	2.01	2.68	89
ERV	L	1.53	—	1.75	114
RV/TLC	%	23	18	17	74

Spirometry (BTPS)		Predicted Range		Pre Bronchodilator	
		Mean	95%	Actual	% Pred
FVC	L	4.80	3.99	4.66	97
FEV ₁	L	4.03	3.34	4.18	104
FEV ₁ / FVC	%	83	73	90	—
FEF25-75 [ISO]	L/s	4.35	2.96	5.66	130
PEFR	L/s	9.17	7.15	9.94	108
FET	sec	—	—	6.72	—
Back Volume	L	—	—	0.12	—
MVV	L/m	170.8	165.5	—	—

Diffusion		Predicted Range		Pre Bronchodilator	
Hb	Drawn	Mean	95%	Actual	% Pred
DLCO	mL/min/mmHg	31.99	29.12	28.27	88
VA [BTPS]	L	6.16	5.01	5.26	85
DLCO/VA	mL/min/mmHg/L	5.19	5.81	5.37	103
VI [BTPS]	L	4.80	3.99	4.26	89
BHT	sec	—	—	10.38	—

G. Antonazzo



J. Antonmaria

Room:
Loc: 53

Opfer: 10

QT/QTC
I-R-T axes

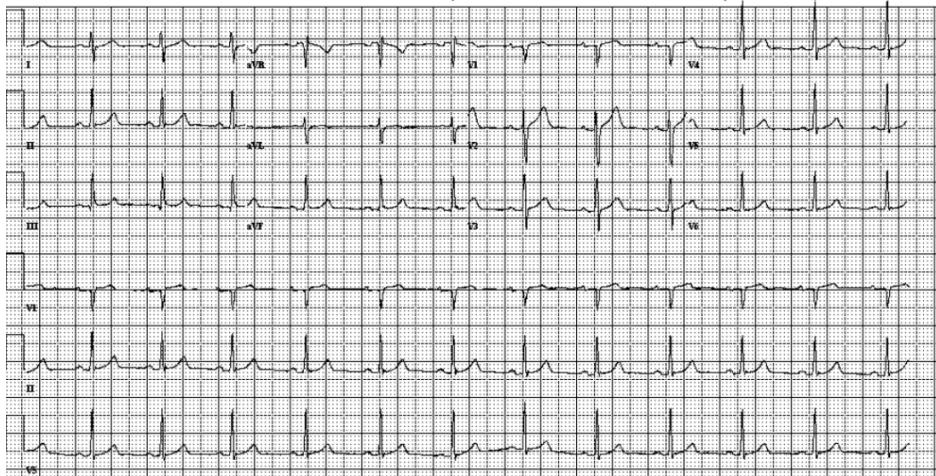
372/469
46 66 57

Confirmed by MCALLEN, EILEEN M.D., 010666 (2), elicit Kendo, Rain (571) on 3/6/2020 1:43:25 PM

Technician: ANEKA ALEXANDER
TestID: 201310

Referred by: Joel Sheinfeld

Confirmed By: 010666 MCALLEN, EILEEN M.D.



12mms/s 10mV/aV 150Hz 9.08 125L741 CID: 72

EID 571 EDT: 13:43 06-MAR-2020 ORDER: 630RJMHDY ACCOUNT: 61132676

Page 1 of 1

Procedure: MR BRAIN W/WO CON
PRID #: R33759548

Account: 81121346

FINAL REPORT

3/12/2020 MRI brain

CLINICAL STATEMENT: Testicular cancer, staging.

TECHNIQUE:

- * Equipment: GE 1.5T MRI (MSK301 Room MR 301) (Station: mr04)
- * Sequences: Multiplanar, multisequence images of head
- * IV contrast: without and with gadolinium-based intravenous contrast
- * Postprocessing: Routine

COMPARISON: None.

CORRELATION: None.

FINDINGS:

BRAIN: Study is slightly limited by motion and pulsation artifact. No suspiciously enhancing brain lesions. No suprasellar or pineal area mass. No mass effect, midline shift or downward herniation. The ventricles are normal size without hydrocephalus. No acute intracranial hemorrhage, infarct, or extra-axial collections.

OTHER: Paranasal sinuses and mastoid air cells are clear.

IMPRESSION:

Baseline MRI of the brain at MSKCC: no evidence for brain metastasis or acute intracranial abnormality.

FINAL REPORT

Dictated By: JOHN KYUNGJIN LYO, MD
Staff Radiologist: JOHN KYUNGJIN LYO, MD

I attest that the above IMPRESSION is based upon my personal examination of the entire imaging study and that I have reviewed and approved this report.

The following terms are used in MSKCC Radiology reports
(except those of breast imaging studies)
to convey the radiologist's level of certainty for a given interpretation.

Diag.
Rad.

** Continued on next page **

DATE: 03/18/2020

ACCT: 21328208

PROVIDER: Kingham, T.Peter (MD) 015784

Last Updated: 03/18/2020 06:41 PM
Service Date: 03/18/2020 06:39 PM

Service:

Hepatopancreatobiliary.

Surgeon Information:

Date of Surgery: 3/18/20.

Operating Room: 13.

Consulting Surgeon: peter kingham.

Diagnosis:

- Pre-Op Diagnosis: germ cell cancer.
- Post-Op Diagnosis (Pending Final Pathology): germ cell cancer.

Nature of Operation:

repair of serosa of duodenum.

Indications:

I was called to the OR by Dr. Sheinfeld at the completion of his retroperitoneal resection to fix a serosal hole to the duodenum.

Procedures Performed:

there was a 1cm area of the third portion of the duodenum that was deserosalized during resection of his tumor. this was not full thickness. 4 3.0 PDS sutures were placed using lembert sutures to bolster the area. hemostasis was assured. dr. sheinfeld then closed.

Estimated Blood Loss:

5 mL.

Closure Presence Statement:

I was present for the entire procedure.

Fax to External MDs:

Fax/External CC: External provider info is not available

Electronic Signatures:

Kingham, T.Peter (MD Attending) (Signed 03/18/2020 18:41)

Authored: Service, Record of Operation, Operative Procedure, Fluids, Attestation Statement, Closure Presence Statement, External Faxing

Last Updated: 03/18/2020 18:41 by Kingham, T.Peter (MD Attending)

DATE: 03/18/2020

ACCT: 21328208

PROVIDER: Sheinfeld, Joel (MD) 002857

Last Updated: 03/23/2020 12:50 PM
Service Date: 03/18/2020 07:39 AM
Entered By: Pieterick, Andrea Transcriptionist on 03/23/2020 08:59 AM

Service:
Urology.

Surgeon Information:
Date of Surgery: 03/18/2020.

Operating Room: MAIN OR 13.

Procedure: 1 OF 1.

Case ID: 1116079.

Primary: SHEINFELD, JOEL Urology.

Fellow: SINGLA, NIRMISH.

Physician Assistant: GREENBERG, MOLLY DARA.

Co-Surgeon: BAINS, MANJIT Thoracic.

Consulting Surgeon: KINGHAM, PETER HPB.

Diagnosis:

- Pre-Op Diagnosis: Bulky residual mass following chemotherapy for metastatic germ cell tumor.
- Post-Op Diagnosis (Pending Final Pathology): Bulky residual mass following chemotherapy for metastatic germ cell tumor, await final pathology.

Nature of Operation:

Bilateral post-chemotherapy retroperitoneal lymph node dissection, resection of retroperitoneal mass greater than 10cm, and resection of inferior vena cava.

Intraoperative consultation: Dr. Peter Kingham for repair of the serosa of the duodenum.

Anesthesia: General.

Findings:

Exploratory laparotomy was within normal limits. The liver was smooth and benign, without visible or palpable abnormalities. Bowel contents were within normal limits. The third portion of the duodenum was densely adherent to the huge retroperitoneal mass, which extended from the level of the renal vessels and the third portion of the duodenum down to the bifurcation of the inferior vena cava and right common iliac artery. This mass was approximately 15 x 8 x 8cm in size. There were no suprarenal masses. There were no pelvic masses.

Procedures Performed:

The patient was brought to the operating room suite. Following successful verification, he was placed on the operating room table in the supine position and Venodyne boots applied to the lower extremities. Intravenous antibiotics were administered. He underwent successful induction of general endotracheal anesthesia, and a 16 French Foley catheter was passed per urethra under sterile technique. The patient was then prepped and draped in the usual sterile fashion and a successful time-out taken.

A midline incision was carried through the skin and subcutaneous tissue down to the fascia. The linea alba was identified, and the peritoneum was entered from the xiphoid process to the pubic ramus. The falciform ligament was excised en bloc with properitoneal fat. Two self-retaining Balfour retractors were placed for adequate exposure, and the abdomen was carefully explored. The OG tube was in good position in the fundus of the stomach. The liver was smooth and benign, without visible or palpable abnormalities.

The omentum and transverse colon were placed over the patient's chest over very wet laparotomy pads, and exposure to the retroperitoneum was achieved by incising the posterior parietal peritoneum from the ligament of Treitz down to the ileocecal region. It should be noted that the duodenum was adherent to this retroperitoneal mass and required sharp dissection. The avascular plane at the root of the mesentery lateral to the right gonadal vessels was developed using sharp and blunt dissection. The small bowel contents and right colon were placed over the patient's chest. As noted, the duodenum was kocherized sharply. All lymphatic tissue between the undersurface of the duodenum and pancreas and the anterior surface of the left renal vein and vena cava were doubly clipped. Great care was taken to achieve excellent flow stasis and to protect the duodenum, pancreas, and superior mesenteric artery. Having mobilized the entire small bowel contents, right colon, and transverse colon, two self-retaining Deaver retractors using the Goligher instrument were placed over three large, very wet laparotomy pads to protect the duodenum and pancreas. No undue traction or tension in this area was noted. Additional mobility of the distal pancreas was achieved by ligating the thick lymphatic tissue medial to the inferior mesenteric vein. The descending colon was mobilized by incising the left white line of Toldt, separating the mesocolon from the anterior surface of Gerota fascia in the avascular plane. The right and left ureters were identified, encircled with yellow vessel loops, dissected proximally and distally, encircled with yellow vessel loops, retracted laterally out of harm's way, and protected throughout the procedure. The right gonadal vein was identified at the level of the internal ring and followed superiorly as it entered the lateral aspect of the vena cava, where it was doubly ligated with 3-0 silk and divided. The entire spermatic cord was resected down to the site of prior orchiectomy.

At this point, attention was then paid to performing the lymphadenectomy using split-and-roll technique. As noted, there was a huge pre caval and intra-aortocaval mass, densely adherent and infiltrating into the distal vena cava and proximal iliac veins and densely adherent to the anteromedial aspect of the aorta and right common iliac artery. Therefore, control of the aorta was achieved by beginning split-and-roll technique on the left side, along the 12 o'clock position of the left common iliac artery, and traced superiorly along the 12 o'clock position of the aorta. The inferior mesenteric artery was sacrificed between #0 silk ties and a 3-0 silk tie, and this was taken up to the level of the left renal vein, which had been skeletonized using split-and-roll technique. The lymphatic tissue in the left parailiac, left paraaortic, retroaortic, and preaortic area was resected, giving us control of the aorta anteriorly, laterally, and posteriorly. Lumbar arteries laterally were doubly ligated with 3-0 silk and divided. The mass was then sharply dissected from the anterior and medial aspect of the aorta and right common iliac artery. The lumbar arteries medially were doubly ligated with 3-0 silk and divided. The mass was sharply dissected from the anterior spinous ligament and psoas fascia and, thus, the remaining part required resecting the mass from the vena cava. This was accomplished using sharp dissection.

Dr. Bains came in at this point and, using sharp and blunt dissection, the mass was dissected from the anterior medial aspect of the vena cava and the anterior aspect of the right common iliac vein. It should be noted that the intrailiac space was skeletonized to gain control of the left common iliac vein. The mass was excised, but it became apparent that there was invasion into the distal vena cava. A cavotomy was performed after proximal and distal control had been achieved. It was evident that the mass invaded the wall of the vena cava a significant, approximately 50%, of the circumference of the distal vena cava and proximal right and left common iliac veins. An attempt to reconstitute the vena cava with a graft did not result in satisfactory flow, and the decision to resect the vena cava from the level of the renal vein down to the proximal iliac vein was performed using a stapler. Frozen section of the distal margin of resection - that is, the area of the iliac veins - was negative for tumor. Lumbar veins had been doubly ligated with 3-0 silk and divided.

The wound was copiously irrigated with peroxide and sterile saline. Hemostasis and lymphostasis were excellent, having been achieved with the extensive use of cautery, clips, and suture ligatures. The limits of the dissection were superiorly the renal vessels and crus of diaphragm, laterally the ureters, and posteriorly the anterior spinous ligament and psoas fascia.

Inferiorly, the bifurcation of the common iliac arteries required excision of the vena cava down to the proximal common iliac veins. All lymphatic tissue and masses within these boundaries were completely resected, skeletonizing the aorta. Given the severity of the desmoplastic reaction, size, and location, this added approximately five hours of operative time.

At the end of the dissection the ureters were intact, as were the renal vessels, major vessels, kidneys, pancreas, duodenum, and SMA. Upon inspection, it was noted that there was a slight serosal tear in the third portion of the duodenum, which was repaired by Dr. Kingham, dictated separately. Upon repair of this very superficial serosal tear, bowel contents were returned to their anatomic position. The posterior parietal peritoneum was reapproximated with interrupted 3-0 silk. The fascia was closed with figure-of-eight #1 PDS. Sponge and needle counts were correct x2. Subcutaneous tissue was irrigated copiously with peroxide and sterile saline and approximated with interrupted #0 Vicryl. Staples were used to approximate the skin edges. A sterile dressing was applied. There were no complications. There was no real acute blood loss. The patient was stable throughout the procedure.

I attest that I was present and performed the entire part of the procedure as noted above. The patient was transferred to the recovery room intubated in satisfactory condition, having tolerated the procedure well.

Estimated Blood Loss:

5,000 mL.

Operative Report - Surgery.

Dictated by: JOEL SHEINFELD, M.D.

Job Number: 1395328.

Closure Presence Statement:

I was present for the entire procedure.

Co-Surgeon, Manjit Bains, was necessary for the successful completion of this case and served as the first assistant due to the complex nature of the procedure and patient's condition. Manjit Bains was essential throughout the duration of the case for the proper positioning, manipulation of instruments, proper exposure, manipulation of tissue, wound closure.

Fax to External MDs:

Fax/External CC: External provider info is not available

Electronic Signatures:

Pieterick, Andrea (Transcriptionist) (Entered 03/23/2020 08:59)

Entered: Service, Record of Operation, Operative Procedure, Fluids, Attestation Statement, External Faxing

Sheinfeld, Joel (MD Attending) (Signed 03/23/2020 12:50)

Entered: Closure Presence Statement

Authored: Service, Record of Operation, Operative Procedure, Fluids, Attestation Statement, Closure Presence Statement, External Faxing

Last Updated: 03/23/2020 12:50 by Sheinfeld, Joel (MD Attending)

DATE: 03/20/2020

ACCT: 21328208

PROVIDER: Riggs, Mackenzie (NP) 085886

Last Updated: 03/20/2020 09:05 AM
Service Date: 03/20/2020 08:28 AM

*** This document has been modified ***

Initial/Reassessment:
INITIAL ASSESSMENT.

03/20/2020 04:40: SpO2 92% 04:51: BP 121/ 60 P 131bpm 06:00: T 37.3C 07:35: RR 18breaths/min.

Suspicion of Severe Sepsis? No.

Comments: 24 y/o male with NGS CT s/p right orchiectomy (9/16/2019), s/p BEP x 4 cycles (LD 12/12/2019) admitted and underwent extensive RPLND and ligation of the IVC on 3/18 with intra-op course complicated by large EBL (4750ml). Post-operative course complicated by lactic acidosis (4.1, now downtrending); and surgical pain managed with hydromorphone PCA. Sepsis alert triggered for tachycardia, tachypnea, and fever (incorrect entry, patient has remained afebrile). Sepsis unlikely at this time as patient has remained afebrile without leukocytosis, and lactic acid is unremarkable (1.1). Patient has remained normotensive. Per Urology team, abnormal vital signs are expected post-operative change. Upon assessment, patient was resting comfortable with no evidence of acute distress, breaths even and unlabored on NC.

- Primary team to place Sepsis Exclusion order
- Initiate sepsis screen or management (blood cultures, lactic acid, antibiotics) as appropriate if patient exhibits signs of infection (fevers, leukocytosis) or if clinically decompensates (hypotension, worsening hypoxia)
- Please page Mackenzie Riggs, ICU NP with any questions or concerns 7492p until 7pm 3/20

Discussed with primary team, Molly Greenberg, PA.

Electronic Signatures:

Riggs, Mackenzie (NP) (Signed 03/20/2020 09:05)
Authored: Initial/Reassessment

Last Updated: 03/20/2020 09:05 by Riggs, Mackenzie (NP)

[Edit History](#)[Initial/Reassessment](#)[Adult Initial/Reassessment](#)[Comments](#)

24 y/o male with NGSCT s/p right orchectomy (9/16/2019), s/p BEP x 4 cycles (LD 12/12/2019) admitted and underwent extensive RPLND and ligation of the IVC on 3/18 with intra-op course complicated by large EBL (4750ml). Post-operative course complicated by lactic acidosis (4.1, now downtrending); and surgical pain managed with hydromorphone PCA. Sepsis alert triggered for tachycardia, tachypnea, and fever (incorrect entry, patient has remained afebrile). Sepsis unlikely at this time as patient has remained afebrile without leukocytosis, and lactic acid is unremarkable (1.1). Patient has remained normotensive. Per Urology team, abnormal vital signs are expected post-operative change. Upon assessment, patient was resting comfortable with no evidence of acute distress, breaths even and unlaborated on NC.

Riggs, Mackenzie

03/20/2020 09:05 AM

- Primary team to place Sepsis Exclusion order

- Initiate sepsis screen or management (blood cultures, lactic acid, antibiotics) as appropriate if patient exhibits signs of infection (fevers, leukocytosis) or if clinically decompensates (hypotension, worsening hypoxia)

- Please page Mackenzie Riggs, ICU NP with any questions or concerns 7492p until 7pm 3/20

Discussed with primary team, Molly Greenberg, PA

Riggs, Mackenzie

03/20/2020 09:04 AM

[Comments](#)

24 y/o male with NGSCT s/p right orchectomy (9/16/2019), s/p BEP x 4 cycles (LD 12/12/2019) admitted and underwent extensive RPLND and ligation of the IVC on 3/18 with intra-op course complicated by large EBL (4750ml). Post-operative course complicated by lactic acidosis (4.1, now downtrending); and surgical pain managed with hydromorphone PCA. Sepsis alert triggered for tachycardia, tachypnea, and fever (incorrect entry, patient has remained afebrile). Sepsis unlikely at this time as patient has remained afebrile without leukocytosis, and lactic acid is unremarkable (1.1). Patient has remained normotensive. Per Urology team, abnormal vital signs are expected post-operative change. Upon assessment, patient was resting comfortable with no evidence of acute distress, breaths even and unlaborated on NC.

- Primary team to place Sepsis Exclusion order

- Initiate sepsis screen or management (blood cultures, lactic acid, antibiotics) as appropriate if patient exhibits signs of infection (fevers, leukocytosis) or if clinically decompensates (hypotension, worsening hypoxia)

- Please page Mackenzie Riggs, ICU NP with any questions or concerns 7492p until 7pm 3/20