Indy Hematology Review® 2022
TOWNHALL CASE PRESENTATION

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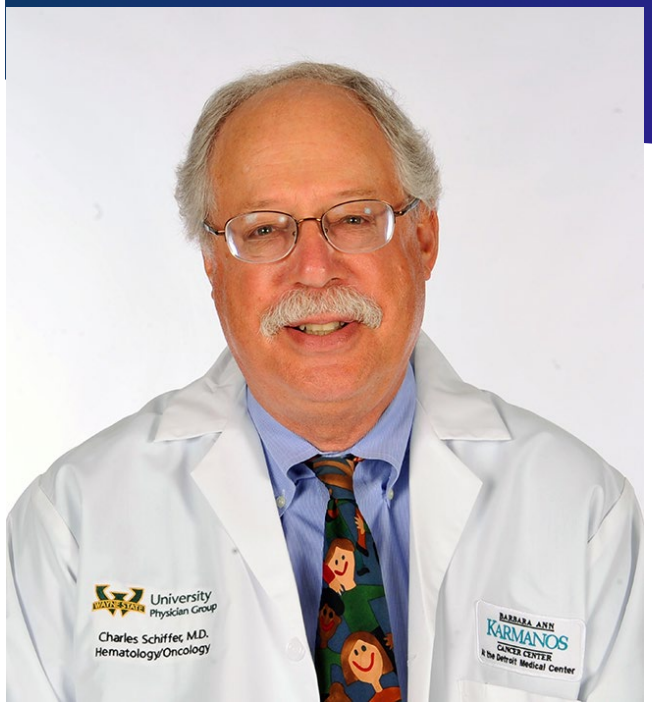
Hematologic Malignancies Town Hall



Charles Schiffer, MD
Emeritus Professor of Oncology and previously the Joseph Dresner Chair for Hematologic Malignancies Wayne State University School of Medicine Detroit, MI

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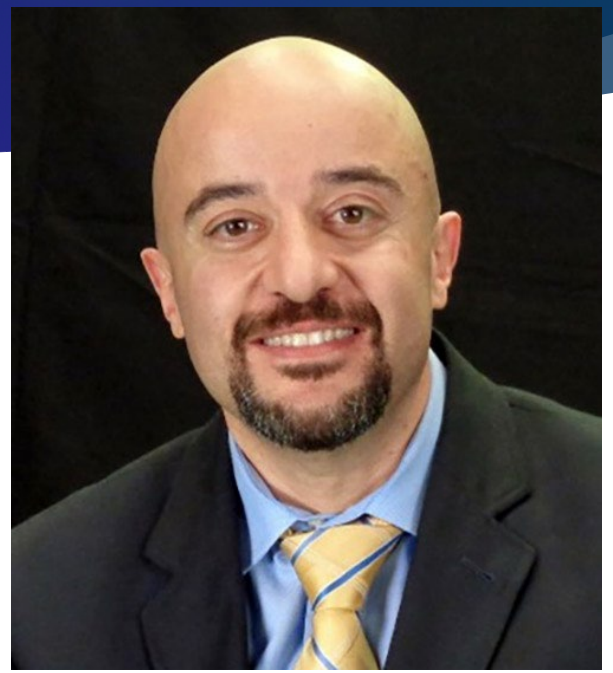

Rami Komrokji, MD
Vice Chair of the Malignant Hematology and Head of the Leukemia and MDS Section at the Moffitt Cancer Center Tampa
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Hematologic Malignancies Town Hall

PLUS: Michael Weimann, MD, Nancy Bartlett, MD, John Leonard, MD, MD,Adrian Wiestner, MD, PhD, Rubin Mesa, MD and

Morie Goertz, M.D.





NEWLY DIAGNOSED SPINE GRADE 3A FOLLICULAR NHL

- 79-year-old healthy woman presents with spinal cord compression in mid July 2022 with 10month history of back pain.
- MRI of the spine: Extradural mass at the T11-12 level compressing the spinal cord and causing cord edema
- CT scans of the chest abdomen pelvis: Small left pleural effusion, mild compression deformities involving the T4 and T8 vertebral bodies which appear old. No adenopathy.
- Biopsy of the T11/12 paraspinal mass showed follicular lymphoma, grade 3A.
- FISH consistent with IGH/Bcl-2 rearrangement. No MYC or BCL6 rearrangements.
- PET/CT scan: Spine lesions only. Bone marrow biopsy negative. Lumbar puncture negative.

NEWLY DIAGNOSED CLL/SLL WITH OBSTRUCTIVE UROPATHY

- 80-year-old man with PMH of diabetes and history of COVID presented with new onset progressive fatigue, weight loss, and dyspnea on exertion.
- Presented for outpatient cardiac catheterization, creatinine 6.6 prior to catheterization.
- CT scans without contrast showed enlargement of bilateral kidneys with prominence of renal collecting system with prominent retroperitoneal adenopathy. No renal collecting systems obstruction.
- SPEIP: Negative
- Perinephric Biopsy: Small lymphocytic lymphoma
- Immunophenotype: Positive for PAX5, LEF (rare), and negative for CD2 and cyclinD1, 46% B cells with a CD19(+)/CD20(+)/CD5(+)/CD23(+)/FMC7(-)/CD200(+) and cyKappa restricted immunophenotype consistent with Chronic lymphocytic leukemia/small lymphocytic lymphoma.
- Bone Marrow biopsy: 5% involvement of CLL.
- Cytogenetics & molecular studies:
- Two related clones: Gain of chromosome 12 with monoallelic del(13q) and gain of chromosome 12 with biallelic del(13q).
- IgHV unmutated
- TP53 somatic mutation not detected

70-YEAR-OLD WITH NEWLY DIAGNOSED PH-POSITIVE ACUTE LYMPHOBLASTIC LEUKEMIA

- 70-year-old man with PMH of hyperlipidemia, GERD, anxiety and depression and obstructive sleep apnea presented to the ED with acute back pain; performance status was ECOG 1 based on recently having progressive decline in endurance and function after having COVID in January.
- MRI abnormal marrow signal concerning for neoplastic disease.
- CBC: WBC: 7.4, hemoglobin: 12.5, platelet count:116.
- Bone Marrow: BCR/ABL1 positive B-lymphoblastic leukemia.
- Flow cytometry: 91% blasts with dimCD45(dim+)/CD34(+)/CD19(+)/CD20(-)/CD10)/HLADR(+)/CD38(+)
- and CD22(+) immunophenotype
- Chromosome Analysis: BCR/ABL1 positive.
- Abnormal Karyotype: Eleven of the twenty metaphases analyzed have material of indeterminate origin on the long arm of one chromosome 9 and the short arm of one chromosome 17, are missing one copy each of chromosomes 13, 19, and 22, and exhibit loss of part of the short arm of one chromosome 12. Nine of these cells also contain an additional copy of chromosome 2. A marker chromosome is present in six cells. No other clonal cytogenetic alterations were evident.
- Complex karyotype observed, which likely loss of TP53 on the short arm of chromosome 17, suggests unfavorable risk.

ESSENTIAL THROMBOCYTOSIS AND MULTIPLE MYELOMA

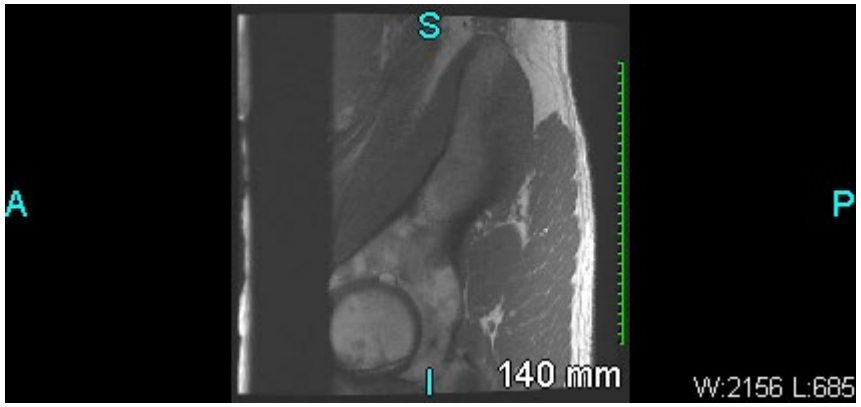
- 61-year-old presented in 2005 with a platelet count of 1.8 million, resulting in treatment with hydroxyurea and aspirin, status post anagrelide.
- November 2021: Presents with an elevated globulin fraction on CMP
- SPEIP: M-protein of 2.1 g/dL with a kappa/lambda ratio of 16.31 with a free kappa of 881 and a lambda of 54 with a normal LDH of 215, and a beta2microglobulin of 1.6. Creatinine 0.92 with a calcium of 9.4, albumin of 4.2, an IgG kappa monoclonal protein and IgG level of 2547 features consistent with monoclonal gammopathy
- Bone marrow biopsy: Normocellular with 40% cellularity, M:E ratio of 2:1, plasma cells representing 35% of nucleated cells with dysplastic plasma cells present. Plasmoblastic features not present.
- Cytogenetics and Myeloma FISH panel: Negative for a gain of 1q loss of 1p, 13q deletion, or IGH rearrangements, or deletion of 17p or the presence of +5, +9, +11, +15 consistent with normal cytogenetics.
- Skeletal survey and a PET/CT negative.
- Diagnosis: Intermediate risk asymptomatic myeloma, using the 2/20/20 criteria, based on patient's 35% marrow involvement with less than 2 grams of M-protein and kappa/lambda ratio of less than 20 with an estimated risk of progression in two years of 17.9%.
- Hydroxyurea discontinued.

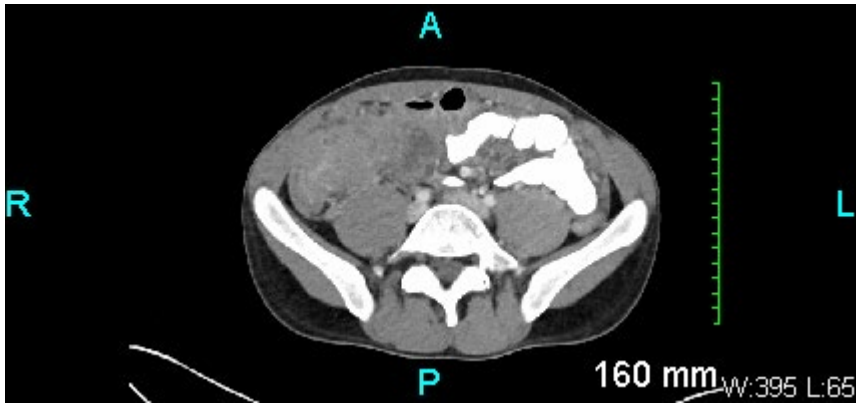
NEWLY DIAGNOSED IDH-2 MUTANT AML

- 54-year-old, presented with pancytopenia:
- Good risk (IDH2 mutation, normal cytogenetics) AML
- 7+3: remission
- QUESTION: What would you give for consolidation?

23-YEAR-OLD WITH BURKITT'S LYMPHOMA

- 23-year-old presents with abdominal pain. CT abdomen/pelvis: thickened terminal ileum
- Colonoscopy/biopsy: Lymphoid follicles with lymphoid hyperplasia and focal mild, chronic inflammation, nonspecific. Clinical diagnosis of Crohn's disease, steroid therapy initiated.
- 2 months later: worsening symptoms difficulty with urination, with sciatica type pain. CT: "Severe rapid progressive mass like thickening of the terminal ileum, highly suspicious for lymphoma.
- MRI Extensive abnormal marrow signal of the sacrum, multiple focal osseous lesions in the ilium, acetabulum and femoral heads, tumor in the distal the spinal canal extending from S2 through S4 with extension into the neural foramen bilaterally, soft tissue mass anterior to the sacrum at the S3 level left piriformis muscle secondary to tumor infiltration.
- Soft tissue/skeletal muscle, core needle biopsy: medium to large lymphoid cells with round
- nucleus, inconspicuous nucleoli and scant cytoplasm. Immunostains: Positive for CD20, CD10, BCL6, C-MYC, and negative for CD3, cyclinD1, BCL2, MUM1 and EBV/CISH, Ki-67 >90%.
- DIAGNOSIS: High grade B cell lymphoma with features suspicious for Burkitt lymphoma.
- FISH testing for BCL2, BCL6, and c-MYC pending



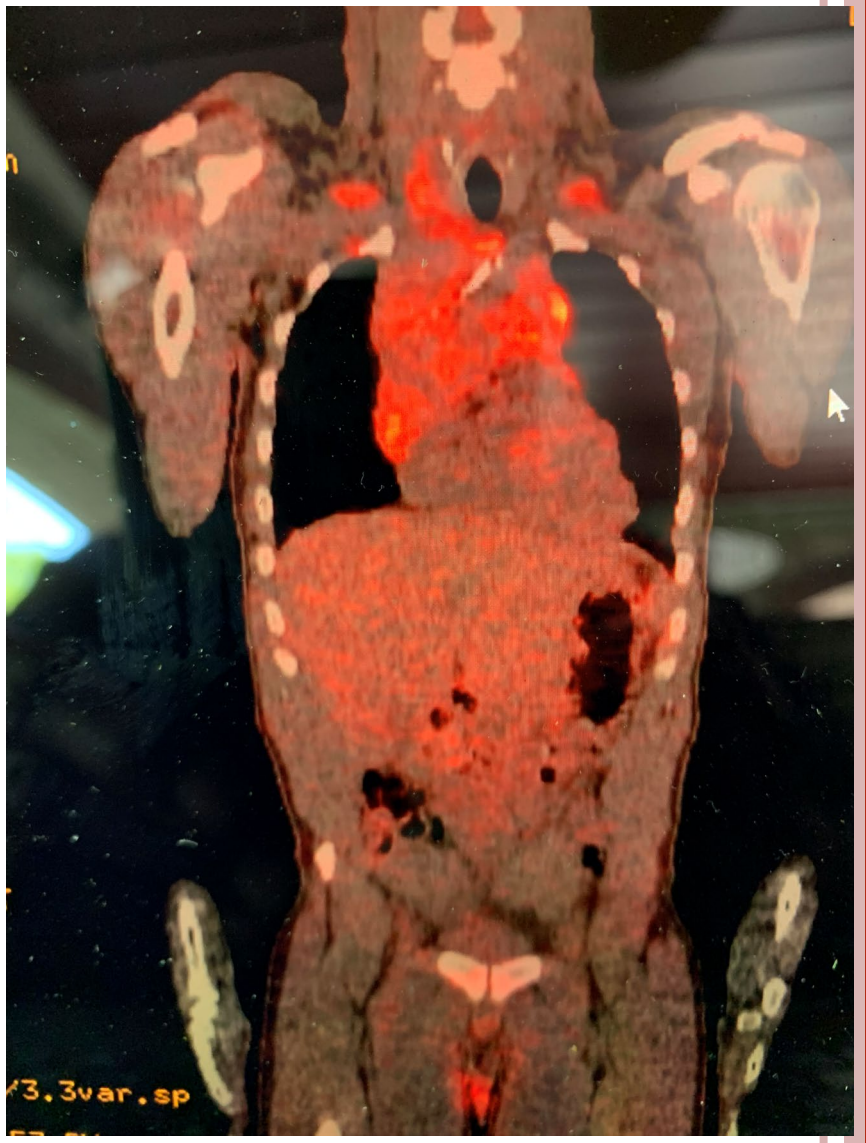


86-YEAR OLD WITH NDMM WITH T11:14

- 86-year-old PMH of prostatic carcinoma, status post radiation therapy in CR presents with self-palpated left inguinal mass in addition to possible left axillary adenopathy
- July 2019, PET CT scan which showed right infrahilar adenopathy for which follow-up was recommended. No evidence of other hypermetabolic, including inguinal adenopathy. PSA was normal.
- SPEIP: IgG kappa monoclonal gammopathy.
- FLC: Free kappa light chain 170.9, free lambda light chain of 9.7 and abnormal kappa:lambda ratio of 18.4.
- BM Biopsy: 10% plasmacytosis
- Diagnosis: Monoclonal gammopathy of undetermined significance versus asymptomatic myeloma. As a result, a monitoring strategy was instituted.
- August 2022 with progressive anemia, creatinine of 1.21, calcium of 9.6, total protein of 7.6, albumin of 3.9, and an M-protein of 1.7 g/dL with serum protein electrophoresis showing an IgG of 249, IgA of 95 and IgM 16 and a free kappa light chain of 1,405.6 with normal lambda of 8.7 and abnormal kappa/lambda ratio of 1.61
- Hemoglobin: 9.5, WBC: 5.2, Platelets165,000, beta2-microglobulin 2.1and an LDH normal.
- PET/CT scan: negative
- Bone marrow biopsy: 40-50% bone marrow kappa restricted plasmacytosis consistent with plasma cell myeloma. Cytogenetics normal 46XY phenotype
- Myeloma FISH: t11;14 consistent with high-risk PCM.

BULKY STAGE STAGE IIA CLASSICAL HODGKIN'S DISEASE

- 38-year-old presents with persistent cough and mild dyspnea without improvement.
- CXR: Anterior mediastinal lesion.
- CT chest: Large soft tissue anterior mediastinum mass: 9.4 x 6.8 x 9.6 cm with contiguous right paratracheal adenopathy, measuring 3.3 x 2.5 cm.
- Bronchoscopy/FNA of 4R lymph node: Lymphocytes with no malignant epithelial cells identified in a nondiagnostic specimen.
- AFP and HCG which were normal at 2.9 and less than 3, Normal CBC
- Robotic assisted thoracoscopy and biopsy of the anterior mediastinal mass.
- Pathology: Classic Hodgkin lymphoma
- Immunostains: Positive for PAX3, CD15 and CD30 and negative for CD45, CD3, CD20 and CD23 and a positivity for EBV/ISH in rare small lymphocytes.
- No B symptoms. Viral serologies negative for HIV and hepatitis. ESR 75, LDH normal.
- PET/CT: 12 cm extensive hypermetabolic mediastinal and bilateral supraclavicular adenopathy



CYTOPENENIC MYELOFIBROSIS

- 65-year presents with anemia and thrombocytopenia
- CBC: Hg 9, Platelets 35K, WBC 15
- Bone marrow biopsy: Grade 3 reticulin fibrosis, cytogenetics:–7, i(17q), JAK-2 mutation V612 positive
- Spleen 4 cm below the left coastal margin
- DIAGNOSIS: Cytopenic Myelofibrosis

NEWLY DIAGNOSED AL AMYLOIDOSIS

- 67-year-old with a history of hypertension presents with 6 months of progressive exertional dyspnea.
- Cardiac MRI: gadolinium enhancement.
- SPEIP: Immunofixation revealed κ Bence Jones protein
- κ-free light chain: 206 mg/L (FLC ratio10.3),
- Bone marrow: 15% plasma cells without chromosomal abnormalities;
- CBC, calcium, and liver function test results were normal; estimated glomerular eGFR) 50 mL/min; proteinuria was 2.7 g per 24 hours, predominantly albumin;
- NT-proBNP) was 10,625 ng/L (ULN: 227 ng/L); and cardiac troponin I (cTnI) was 124 ng/L (url, 44 ng/L).
- PET/CT scan showed no bone lesions.
- Abdominal fat aspirate showed amyloid deposits by CONGO RED stain.
- Kidney biopsy: AL amyloidosis typed as AL κ by immunoelectron microscopy
- Genetic testing for hereditary ATTR amyloidosis negative.
- Diagnosis of AL amyloidosis with cardiac and renal involvement.

NEW DIAGNOSED STAGE IVB MANTLE CELL LYMPHOMA

- 55-year-old presents with progressive abdominal pain resulting in a CT scan which revealed a massively enlarged spleen with perisplenic fluid and mass effect on the adjacent organs with extensive retroperitoneal adenopathy, lower paraesophageal and bilateral obturator lymphadenopathy.
- Bone marrow biopsy: Extensive involvement with a low-grade CD5 negative CD10 positive B- cell lymphoma, comprising of 6070% cellularity by immunohistochemistry without evidence of large cell lymphoma.
- Immunophenotype was nonspecific. Subsequent evaluation revealed cyclin D1 expression, translocation of 11;14, supporting a diagnosis of mantle cell lymphoma. Gene rearrangement negative for BCL6 ,MYC rearrangement or amplification of MYC, MALT1 rearrangement was not detected. IgH rearrangement was detected in addition to absence of translocation of 4,18.
- PET/CT scan: diffuse multifocal hypermetabolic lymphadenopathy below and above the diaphragm, associated with splenomegaly and marrow activity, consistent with Stage IV disease,
- DIAGNOSIS: Stage IVB Mantle cell lymphoma
- Bendamustine/rituximab x 5 cycles complicated by COVID pneumonia in PET CR