Case Study Discussions on the Nurse's Role in Caring for Patients With Hematologic Malignancies

Support for this program provided by TEVA Oncology

Welcome and Overview

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www.LLS.org/CE

Faculty Disclosures

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Have no affiliations with commercial interests to disclose

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Case Study Discussions on the Nurse's Role in Caring for Patients With Hematologic Malignancies

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Multiple Myeloma: Case Study

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Primary Nurse
Moffitt Cancer Center
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Outline

- Understanding the Disease
  - Staging systems
  - Response criteria
- Case Study
- Treatment Strategy
  - Transplant vs non-transplant candidate
- Treatment Options
  - Newly diagnosed
- Nursing Considerations for Myeloma Patients
  - Bone health
  - Kidney health
  - Anemia
  - Preventing complications
- Multidisciplinary Team
  - Social worker
  - Physical and occupational therapist
    - Financial assistance

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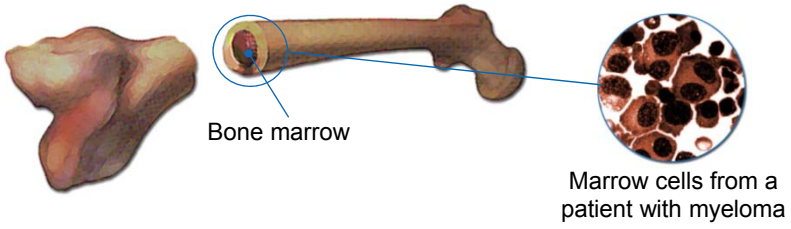
What Is Myeloma?

Cancer of plasma cells

- An uncontrolled growth of plasma cells

Myeloma begins in the bone marrow

- Spongy tissue found in the center of bones



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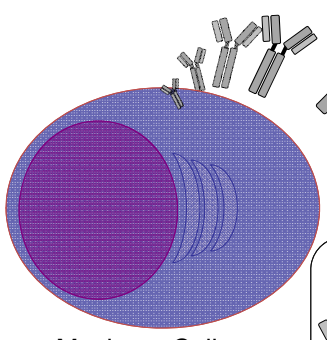
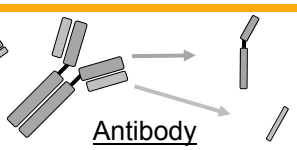
"M-spike"– Monoclonal Paraproteins



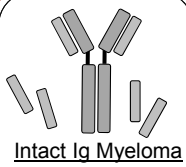
Myeloma Cell
- Produce Antibodies



Antibody
- Heavy and light chain components

Heavy Chain
- IgG >IgA >>IgD & IgE >> IgM

Light Chain
- Kappa (κ) > lambda (λ)



Intact Ig Myeloma
~80% MM
Eg, IgG kappa

Light Chain Myeloma
~15%–20% MM
Eg, kappa

Non-Secretory/ Oligosecretory
~0.5%–5% MM
Eg, kappa

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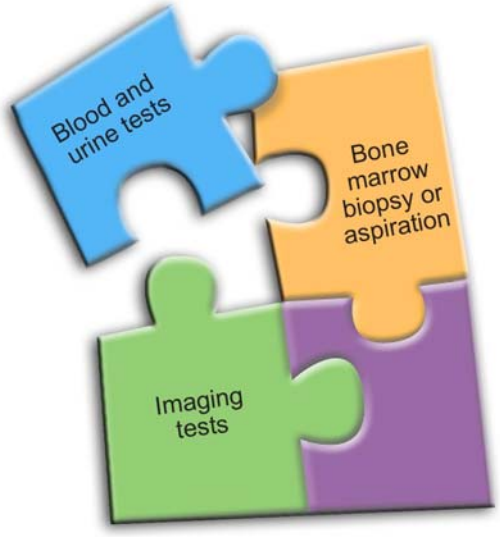
Ig, immunoglobulin; MM, multiple myeloma.

Diagnosing Myeloma



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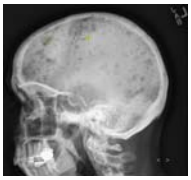
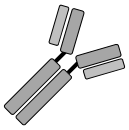
Diagnosis: "CRAB" Criteria

Presentation:

- Hypercalcemia (*C*)
- Renal Failure (*R*)
- Anemia (*A*)
  - Fatigue
- Fractures (*B*)
  - Bone pain
- Infections (I)



Ca^{++}



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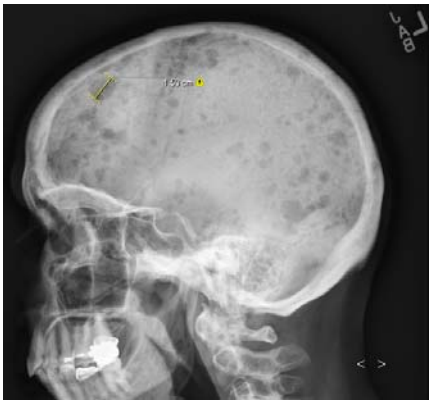
Durie BG, et al. *Leukemia.* 2006;20(9):1467–1473.

Lytic Lesions



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Durie-Salmon Staging System

Stage I	***All of the following:*** **Hemoglobin >10 g/dL** **Serum calcium normal (<12 mg/dL)** **Bone X-ray normal or solitary bone plasmacytoma only** **Low M-protein production (IgG <5 g/dL; IgA <3 g/dL)** **Bence-Jones protein <4 g/24 hours**
Stage II	**Fitting neither stage I nor III**
Stage III	***One or more of the following*:** **Hemoglobin <8.5 g/dL** **Serum calcium >12 mg/dL** **Advanced lytic bone lesions** **High M-protein production rates (IgG >7 g/dL; IgA >5 g/dL;** **Bence-Jones protein >12 g/24 hours)**

Durie-Salmon sub classifications (either A or B)
A: Relatively normal renal function (serum creatinine value <2.0 mg/dL)
B: Abnormal renal function (serum creatinine value =2.0 mg/dL)

Ig, immunoglobulin.

Durie BG, et al. *Cancer*. 1975;36(3):842–854.

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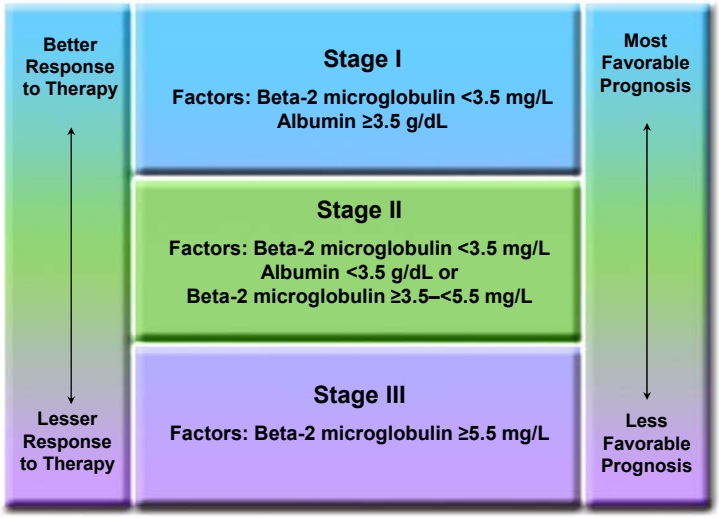
International Staging System (ISS)



Greipp PR, et al. *J Clin Oncol.* 2005;23(15):3412–3420.

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MM Risk Stratification

High Risk (25%)	Standard or Good Risk (75%)
t(4;14) by FISH t(14;16) or t(14;20) by FISH Deletion 17q13 by FISH Deletion 13 by metaphase analysis Aneuploidy by metaphase analysis Plasma cell labeling index >3.0 Beta-2 microglobulin >5.5 High-risk MyPRS™	Hyperdiploidy t(11;14) by FISH t(6;14) by FISH Beta-2 microglobulin <5.5 Labeling index <2.0

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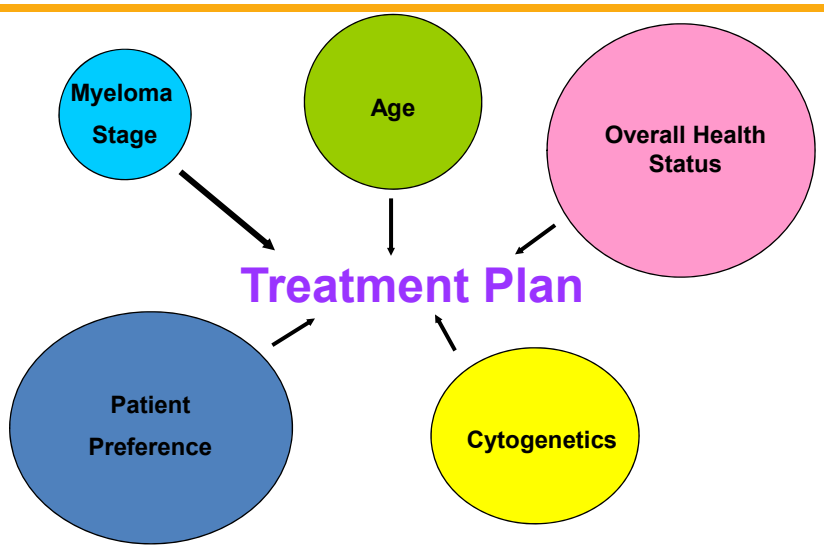
FISH, fluorescence in situ hybridization; MM, multiple myeloma; MyPRS, Myeloma Prognostic Risk Signature.

Factors Influencing Treatment Choice



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The Leukemia & Lymphoma Society. *Myeloma: A Guide for Patients and their Families.* March 2005.

Response Criteria

Response Type	M Protein	Plasma Cells in Bone Marrow	Other
Stringent complete response (sCR)	None (blood/urine)	No abnormal plasma cells	No free light chains
Complete response (CR)	None (blood/urine)	<5%	Disappearance of soft tissue plasmacytoma
Very good partial response (VGPR)	>90% reduction (blood)	NA	NA
Partial response (PR)	>50% reduction in serum and >90% reduction in urine	NA	>50% reduction in the size of soft tissue plasmacytoma
Minimal response (MR)	25%–49% reduction in blood and reduction of 50%–89% in urine	NA	25%–49% reduction in the size of soft tissue plasmacytoma
Stable disease (SD)	Does not meet criteria for response or progressive disease		
Progressive disease (PD)	>25% increase (blood or urine)	>10%	New bone lesions, soft tissue plasmacytoma, high calcium levels

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Durie BG, et al. *Leukemia*. 2006;20(9):1467–1473.

Case Study

- 61-year-old male
- Presentation
  - SPEP: 3.6
  - IgG: 6791
  - Serum free light chain - Lambda: 89.56
  - Beta-2 microglobulin: 2.3
  - Albumin: 3.2 g/dL
  - Calcium: 8.2 mg/dL
  - Creatinine: 0.8 mg/dL
  - Hemoglobin: 9.3 g/dL
  - UPEP: 156 mg/24 hours
- BMBX 70%–80% plasma cells
- Survey + lytic lesions
  - Skull
  - 8th rib fracture
  - FISH results
    - Hyperdiploidy
    - 13q deletion
    - t(11;14)
  - **ISS II**
  - **Durie-Salmon Stage 2A**

BMBX, bone marrow biopsy; FISH, fluorescence in situ hybridization; Ig, immunoglobulin; SPEP, serum protein electrophoresis; UPEP, urine protein electrophoresis.

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Treatment Options for Transplant-Eligible Patient

- Transplant
  - Avoid melphalan
  - RVD
    - Lenalidomide 25 mg, days 1–14
    - Bortezomib 1.3 mg/m^2, days 1, 4, 8, and 11
    - Dexamethasone 20 mg PO, days 1, 2, 4, 5, 8, 9, 11, and 12
  - VDC
    - Bortezomib 1.3 mg/m^2, days 1, 4, 8, and 11
    - Cyclophosphamide 500 mg PO, days 1, 8, and 15
    - Dexamethasone 20 mg PO, days 1, 2, 4, 5, 8, 9, 11, and 12

Bisphosphonate Monthly

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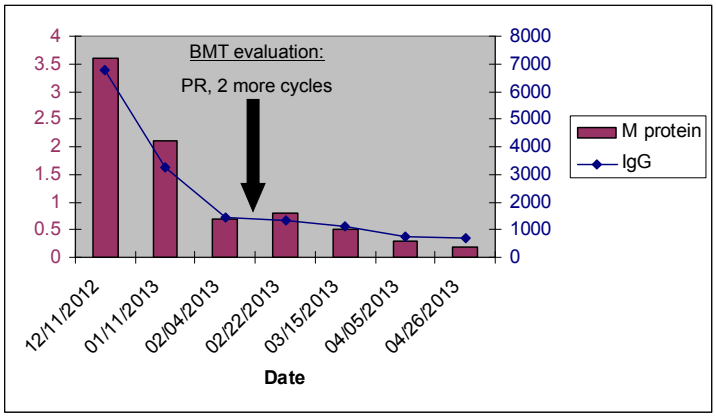
RVD, lenalidomide, bortezomib, and dexamethasone; VDC, bortezomib, dexamethasone, and cyclophosphamide.

Response: VGPR



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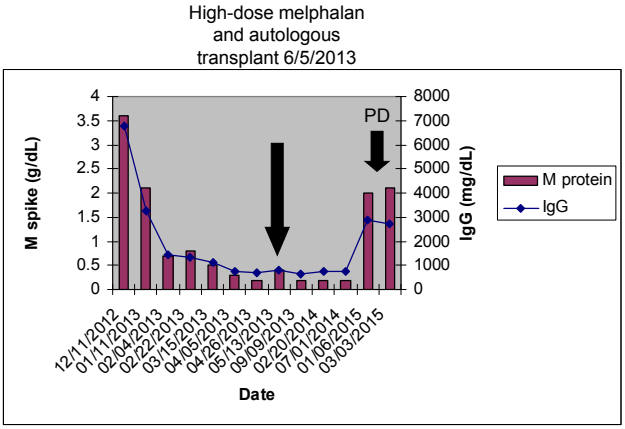
BMT, bone marrow transplant; Ig, immunoglobulin.

Disease Course



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Ig, immunoglobulin.

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Nursing Considerations

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Managing Side Effects

Immunomodulatory Drugs (IMiDs)

	Thalidomide	Lenalidomide	Pomalidomide
Myelosuppression	Minimal	Yes	Yes
VTE	Yes	Yes	Yes
GI	Constipation	Diarrhea	Diarrhea
Rash	Yes	Yes	Yes
Sedation	Yes	No	No
Neuropathy	Yes	No	No

Teratogens!

GI, gastrointestinal; VTE, venous thromboembolism.

Proteasome Inhibitors

	Bortezomib	Carfilzomib
Schedule	Days 1, 4, 8, and 11 every 21 days	Days 1, 2, 8, 9, 15, and 16 every 28 days
Modes of administration	IV/SC	IV
Myelosuppression/ thrombocytopenia	Yes	Yes
Neuropathy	Yes	No
Zoster	Yes	Yes
Dyspnea	No	Yes
Fatigue	Yes	Yes
GI	Yes	No
Cardiac/pulmonary (RARE)	No	Yes

GI, gastrointestinal; IV, intravenous; SC, subcutaneous.

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Steroids (Dexamethasone/Prednisone)

- Mood Swings
- Insomnia
- Irritability
- Hyperactivity
- Edema
- Flushing
- Fatigue
- Blurry vision
- Cataracts
- Dyspepsia
  - PPI
- Muscle atrophy
- Hyperglycemia
- Acne
- Muscle cramping
- Taste changes
- Ulcer
- Weight gain
- Hair loss

PPI, proton pump inhibitor.

Faiman B, et al. *Clin J Oncol Nurs*. 2008;12(3):53–62.

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Nurse's Role

- Education and support
  - Oral adherence to complex regimens
- Improving quality of life by helping to manage side effects
- Navigating patients and their caregivers throughout the disease process

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Bone Health

- Bisphosphonates
  - Avoid invasive dental procedures
  - Prevent pathological fractures
    - Orthopedist
    - Neurosurgeon
- Pain control
  - Avoid NSAIDs
  - Narcotic education

NSAID, non-steroidal anti-inflammatory drugs.
Miceli TS, et al. *Clin J Oncol Nurs.* 2011;15(4):9–23.

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Renal Health

- Cast nephropathy (myeloma kidney)
- Hypercalcemia
  - Aggressive hydration and treatment
- Dehydration
  - IV fluids
- NSAIDS
- IV contrast
- Aminoglycoside antibiotics
  - Gentamycin, tobramycin, etc.
- Bisphosphonates

IV, intravenous; NSAID, non-steroidal anti-inflammatory drugs.
Faiman B, et al. *Clin J Oncol Nurs.* 2011;15(4):66–76.

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Anemia

- Due to disease or treatment
- Supportive care
  - Erythropoietin-stimulating agents
    - Epoetin alfa
    - Darbepoetin alfa
  - PRBC transfusions
  - Fatigue
    - Treatment
    - Disease
    - Physical therapy

PRBC, packed red blood cell.

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Safety and Mobility

- Exercise
  - Physical/Occupational therapy
- Nutrition and hydration
  - Consult from nutritionist
- Psychosocial well-being
  - Support system
  - Fatigue
  - Sleep disturbances
  - Anxiety
  - Depression

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Rome SI, et al. *Clin J Oncol Nurs*. 2011;15(suppl):41–52.

Multidisciplinary Team Approach

- Social workers
  - Financial assistance programs
    - Non-profit organizations
      - The Leukemia & Lymphoma Society
      - Chronic Disease Fund
      - Patient Network Access
    - Pharmaceutical companies
- Physical and occupational therapists
- Dietician
- Pharmacist
- Dentist

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Summary

- Multiple myeloma is most often a chronic and complex disease
- Treatment decisions are individualized to the patient
- Managing side effects helps patients maintain quality of life
- A multidisciplinary team approach helps support patients and caregivers

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Thank You

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Case Study Discussions on the Nurse's Role in Caring for Patients With Hematologic Malignancies

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Follicular Lymphoma: Case Study

Lynn Rich, ANP-BC, OCN
Nurse Practitioner
JP Wilmot Cancer Institute
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Rochester, NY

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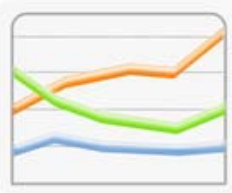
Outline



- Define disease
- Epidemiology
- Natural history of disease
  - Indolent vs curable
- Approved treatment options
  - Rituxan maintenance vs observation
- Use of idelalisib
- Communication strategies: support of social workers
- Resources: survivorship challenges

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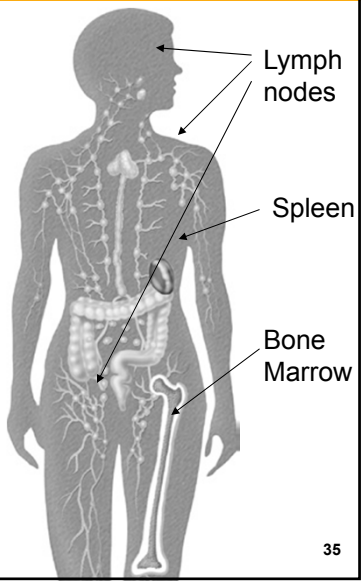
Lymphoma

General name given to a group of cancers that affect the lymphatic system

- Includes:
  - Lymph nodes
  - Plasma cells
  - Spleen
  - Lymphatic vessels
  - Bone marrow
  - Immunoglobulins
- Immune system helps protect against disease and infection



The Leukemia & Lymphoma Society. *Non-Hodgkin Lymphoma.* 2013.

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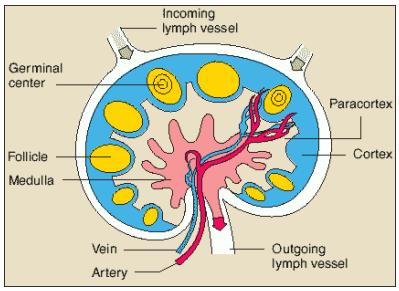
Lymphoma

Two distinct types:

- Non-Hodgkin lymphoma (NHL)
  - Approx. 50 different subtypes
- Hodgkin lymphoma (HL)
  - Approx. 5 different subtypes



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Follicular Lymphoma (FL)

- B-cell NHL (vs T/NK-cell NHL)
- Damage to DNA of one of the parent B cells causes a malignant transformation resulting in uncontrolled and exaggerated growth of the lymphocyte

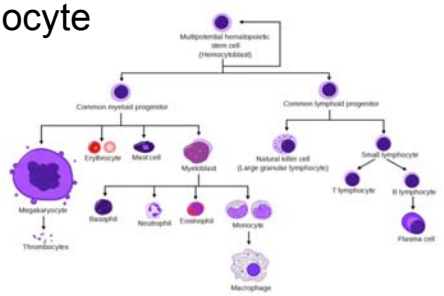

Image courtesy of JP Wilmot Cancer Institute; Chronic Lymphocytic Leukemia (CLL) Booklet.

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Follicular Lymphoma (FL)

- **2nd** most common subtype of NHL
- Average age at diagnosis is 60 years
- Indolent: slow-growing disease
- Treatable, but not curable
  - Impact of deciding treatment

The Leukemia & Lymphoma Society. *Non-Hodgkin Lymphoma.* 2013.

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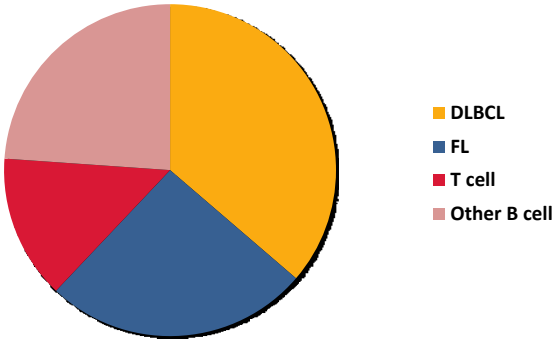
NHL: Epidemiology

Approximately 70,800 new cases of NHL in 2014



DLBCL, diffuse large B-cell lymphoma.
The Leukemia & Lymphoma Society. *Non-Hodgkin Lymphoma*. 2013.

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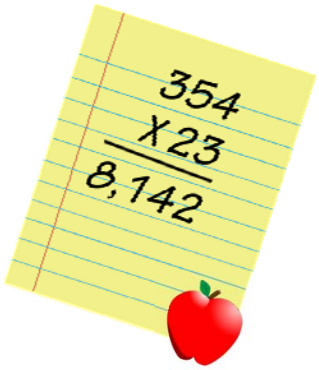
Case Study: MB

- 57-year-old married female
  - 3rd-grade elementary teacher
  - Symptom profile
    - Abdominal fullness
    - Sweats
    - Fatigue
    - Lymphadenopathy
  - Next step, stage?



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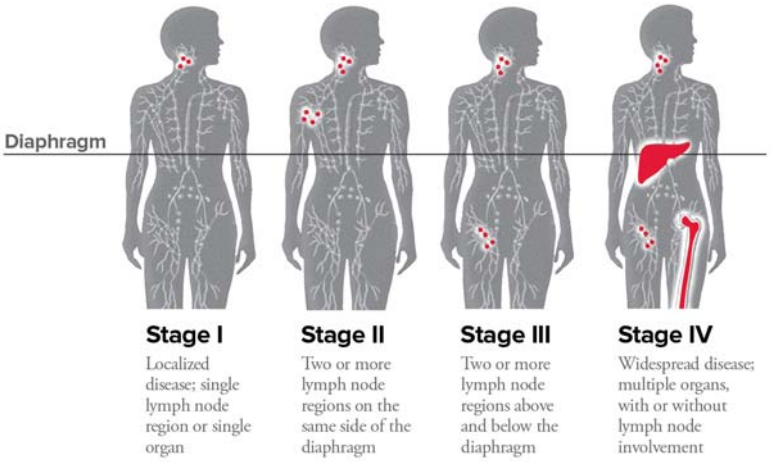
Ann Arbor Staging System



The Leukemia & Lymphoma Society. *Non-Hodgkin Lymphoma.* 2013.

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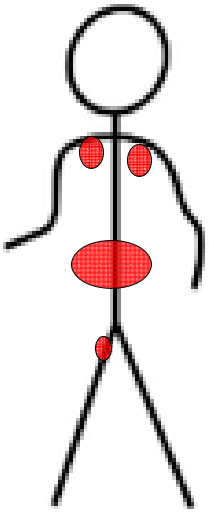
Case Study: MB

- Stage III
  - Bilateral axillary – small
  - Abdominal – 10-cm mass
  - Small inguinal node (groin node)
  - Bone marrow negative (would have been stage IV)



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Treatment

- Watch and wait?
- Grade 1, 2, or 3?

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Ready to Treat

- Criteria includes:
  - >3 sites of disease, 3 cm or more
  - 1 node measuring 7 cm
  - Cytopenias – refractory thrombocytopenia disease
  - Effusions
  - Symptoms of disease, or B symptoms
  - Threatened organ involvement
  - Elevated LDH

LDH, lactate dehydrogenase.

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Case Study: MB

- Treated with R-CHOP – completed 2007
  - Attained complete remission
- Consider maintenance with rituximab vs observation
  - Upfront vs consolidation
  - Things to consider:
    - Expected response
    - Impact on overall survival
    - Quality of life
    - Financial impact

R-CHOP, rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone.

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Case Study: MB

- No maintenance rituximab
- Relapsed in 5/2008
  - Concerning?

- What we did:
  - Salvage RICE × 2, then autologous stem cell transplant
  - Complete remission 9/2008

RICE, rituximab, ifosfamide, carboplatin, and etoposide.

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Case Study: MB

- Relapsed 12/2014
  - Essentially asymptomatic – mild abdominal fullness
  - However, CT of abdomen showed increased disease
- Is she ready for treatment?
  - What are the treatment options?

CT, computed tomography.

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Idelalisib – What Is It?

- PI3K inhibitor
  - Phosphoinositide 3-kinase delta

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Idelalisib

- Oral agent
- FDA approved in 2014
- Used for CLL/SLL or FL
- In relapsed setting

CLL/SLL, chronic lymphocytic leukemia/small lymphocytic lymphoma.

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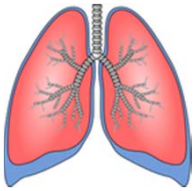
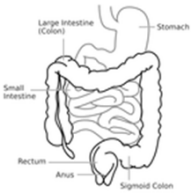
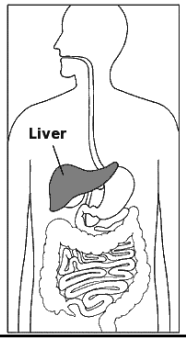
Side Effect Profile



- Concern for pneumonitis or colitis
  - What to look for
  - When concerned
  - How to follow



- Concern for evolution of liver function abnormalities
  - What to look for
  - When concerned
  - How to follow



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Things to Consider

- Is this patient a good candidate?
  - Why wouldn't she be?
  - Why would she be?

- Bring in social worker
  - Help to assess medical literacy (implications)
  - Help with financial assistance
    - What are potential sources of assistance?

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Communication Strategies

- Create a calendar with details
  - When to take pills, get blood drawn, etc.
- Dialogue with patient
  - Check in by phone
    - At least weekly initially
    - Consider MyChart®

- Eventually evolve to monthly visits, if tolerated

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What Happened to MB?

- Began idelalisib 150 mg BID
- Well tolerated
- Held after 2 months for elevated LFTs
- Update to date…

BID, twice daily; LFTs, liver function tests.

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Resources – Survivorship Issues

- The Leukemia & Lymphoma Society
  - www.LLS.org
  - Explore local chapter support groups
- YMCA – Exercise program
  - Explain cancer survivor
  - Describe health and fitness programs
- Look for specific related survivor support groups
  - www.LLS.org/survivorship

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