



**EMPOWERING MYELOMA PATIENTS:
STRATEGIES FOR
MANAGING SIDE EFFECTS**

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WELCOMING REMARKS

**EMPOWERING MYELOMA PATIENTS:
STRATEGIES FOR MANAGING SIDE EFFECTS**

Lizette Figueroa-Rivera, MA
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The Leukemia & Lymphoma Society



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DISCLOSURES

EMPOWERING MYELOMA PATIENTS: STRATEGIES FOR MANAGING SIDE EFFECTS

Dr. Noffar Bar
Consulting: Sanofi



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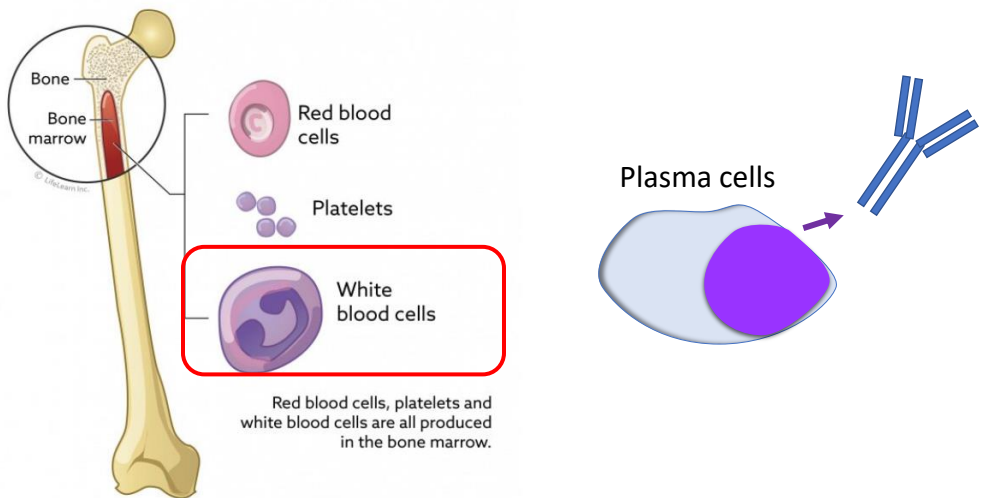
Structure of Today's Talk

- Brief overview of myeloma diagnosis and goals of treatment
 - What is new in treatment of newly diagnosed myeloma
 - What is new in treatment of relapsed refractory myeloma

As patients with myeloma are living longer, we must continue to work on maintaining and or improving quality of life

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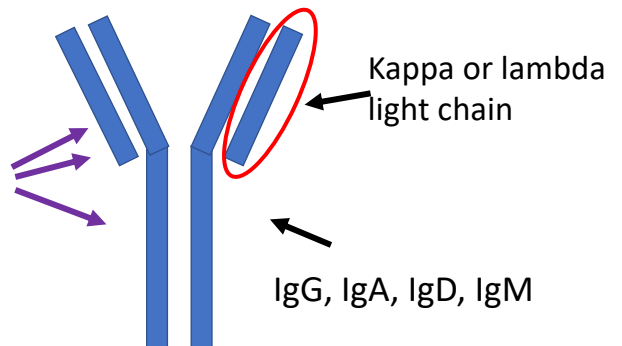
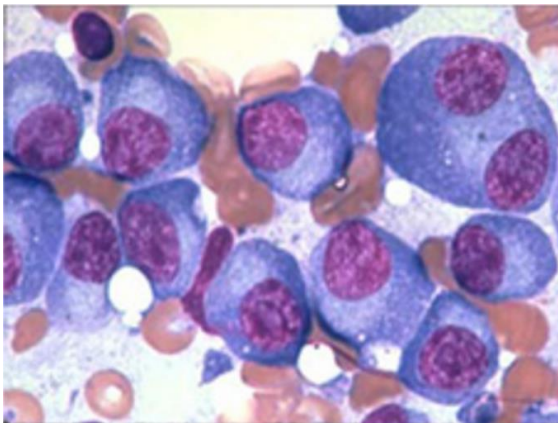
Plasma Cells are a Type of White Blood Cells that Help Fight Infections



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Multiple Myeloma is a Cancer of Plasma Cells

Plasma cells



M-protein or M-spike

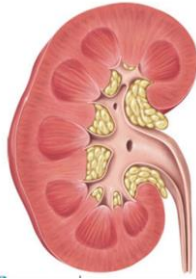
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How Does Multiple Myeloma Affect the Body?

High calcium, Kidney (renal) damage, anemia and bone pain/lesions



C



R



A



B

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Myeloma Diagnosis: Impact on Quality of Life

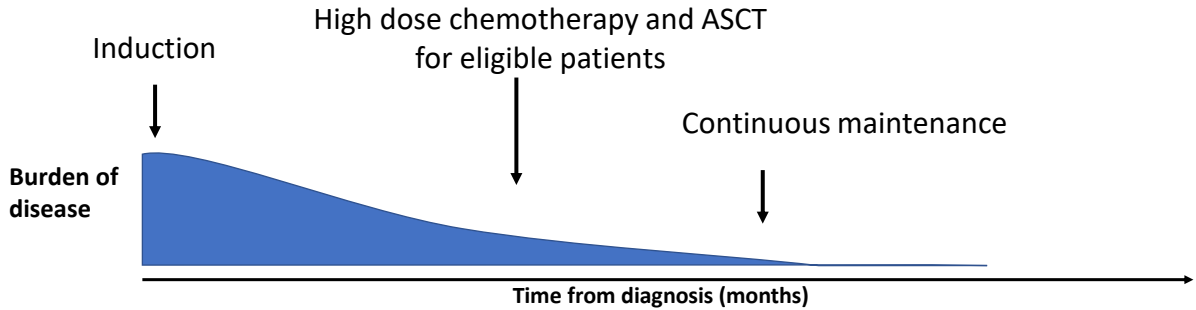
- Increased health system interaction: physician visits, treatment visits
- Mental burden of taking anti-myeloma treatment for years
- Side effects from anti-myeloma treatments
- Pain from myeloma bone disease: physical therapy and multidisciplinary care with neurosurgeon and pain management is important

Pain

Fatigue

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Initial Therapy for Myeloma



Goal of therapy is to achieve **deep** and durable responses

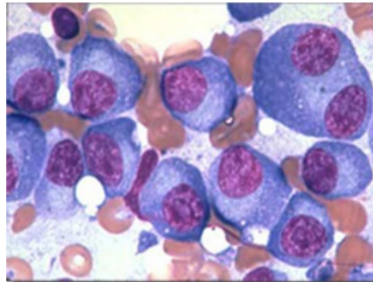
↑
Minimal residual disease (MRD) negativity

ASCT= autologous stem cell transplant

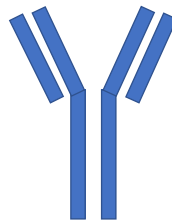
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Response Assessment in Multiple Myeloma

Plasma cells



Monoclonal protein



Partial response

50% reduction of monoclonal protein

Complete response (CR)

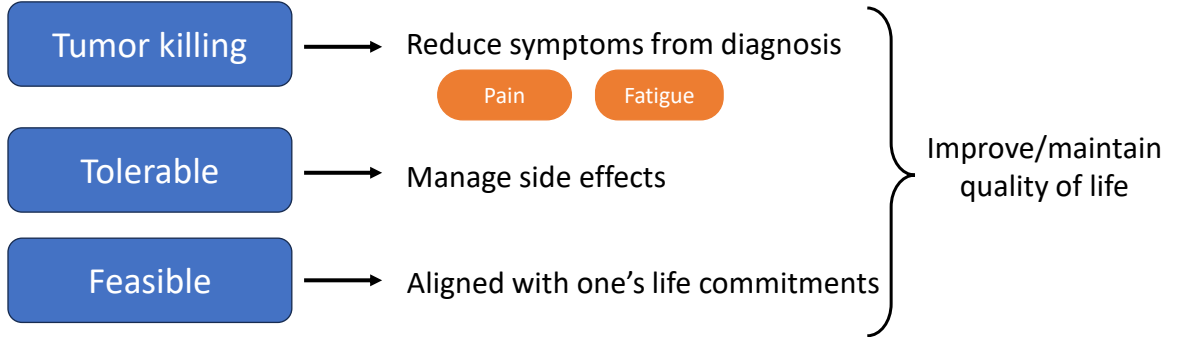
Disappearance of monoclonal protein and no clonal plasma cells on routine bone marrow biopsy

MRD negativity

Absence of plasma cells by sensitive tests that pick up microscopic cells and gene sequencing with sensitivity of up to 10^{-6}

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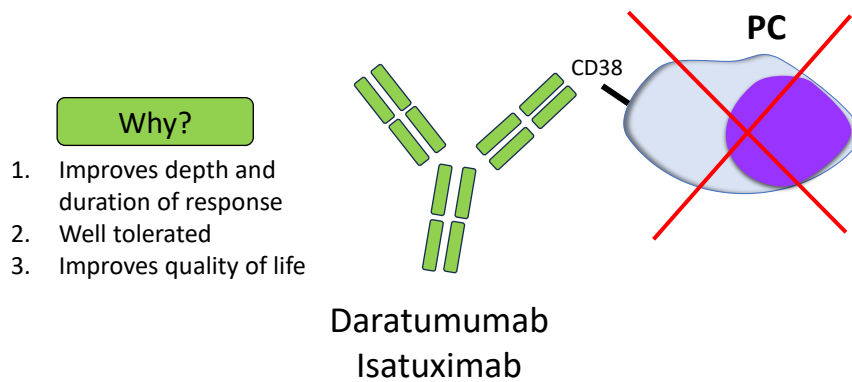
Treatment Goals



Terpos et al. Blood Cancer Journal, 2021

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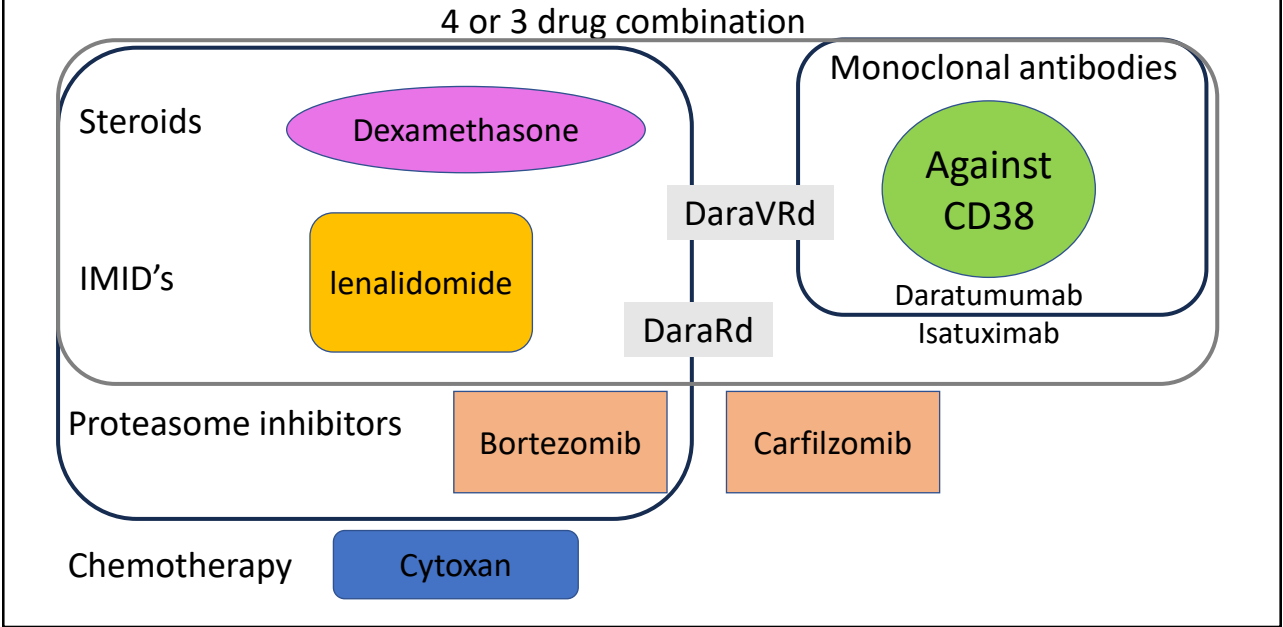
Initial Treatment for Myeloma now Includes a Monoclonal Antibody



Lonial et al. Clinial lymphoma, Myeloma and Leukemia 2023

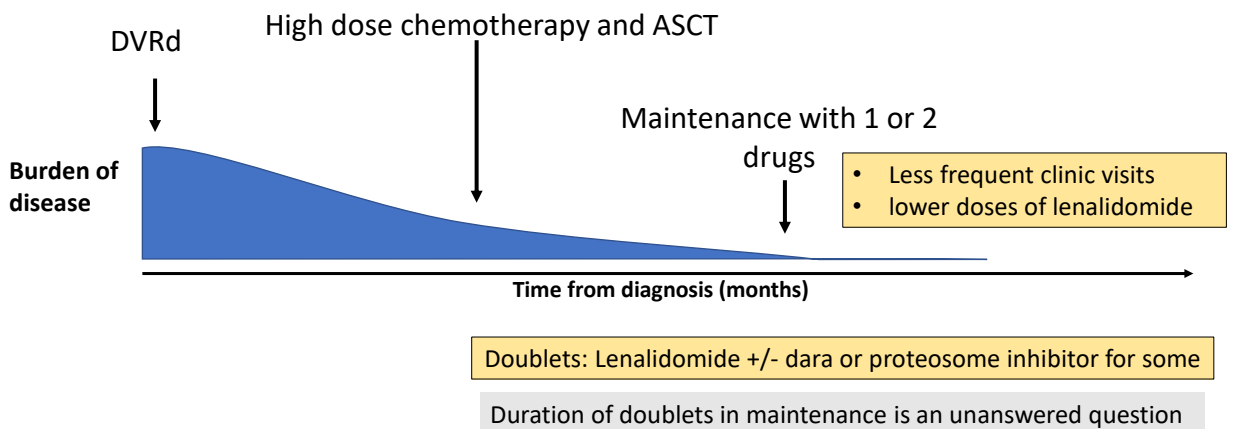
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How to Choose Initial Therapy (Induction)?



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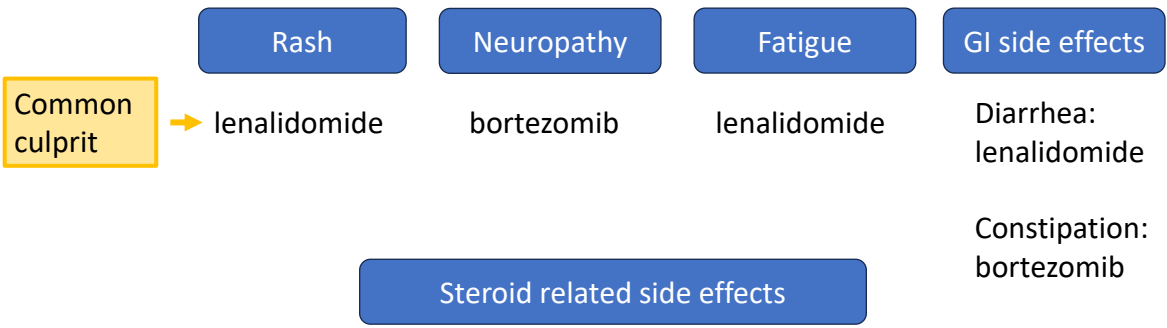
Initial Therapy for Myeloma



ASCT= autologous stem cell transplant

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Common Side Effects with Induction/Maintenance



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Rash

Common culprit: lenalidomide

Steps in managing side effect

If mild

Anti-histamines

Topical corticosteroids (ie: triamcinolone)

If worse

Hold Lenalidomide

In addition to above, consider oral prednisone

Restart len at lower dose



Delforge and Ludwig, Blood 2017

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Peripheral Neuropathy

Common culprit: bortezomib

Higher risk

- Twice weekly dosing
- IV formulation

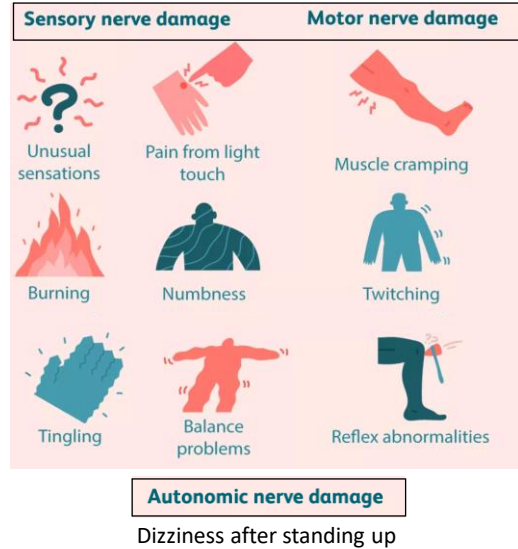
Steps of managing side effect

Monitoring for symptoms and adjusting dose for mild symptoms

Holding dose when neuropathy involves pain or more than mild

Gabapentin, pregabalin or anti-depressant to improve pain

Very limited data for electroacupuncture

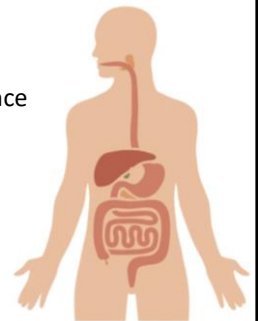


Garcia et al. journal of hematology and oncology 2014; Richardson et al Leukemia 2012

Diarrhea

Common culprit: lenalidomide

- Baseline factors that might increase the risk of diarrhea: history of IBS, lactose intolerance
- Lenalidomide has small amount of lactose
- Lenalidomide can lead to bile acid malabsorption



Managing side effect

Fluid intake

Imodium trial

Low fat diet

Bile acid binders like colesevelam (welchol)

Dose reduction depending on severity and response to initial steps

Taken in the AM, at least 4 hours apart from lenalidomide

Hultcrants, et al, Blood Cancer Journal, 2024; Pawlyn et al, Blood 2014; Smith et al. Clinical Journal of Oncology Nursing, 2008

Constipation

Common culprit: bortezomib

Other factors that can contribute to constipation

- Opiates
- Anti-nausea medication like zofran

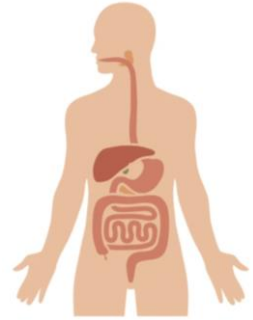
Managing side effect

Increase water intake

Mobility

Fiber

Stool softener/laxative
colace/senna/miralax



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Dexamethasone

Dexamethasone is given as part of anti-myeloma therapy and as a pre-medication prior to daratumumab

Fluid retention- leg swelling

High blood pressure

High blood sugars

Cataracts

Insomnia-> fatigue

Mood changes

Bone density loss

Muscle weakness

Infections

Some toxicities occur in the short term and others over time

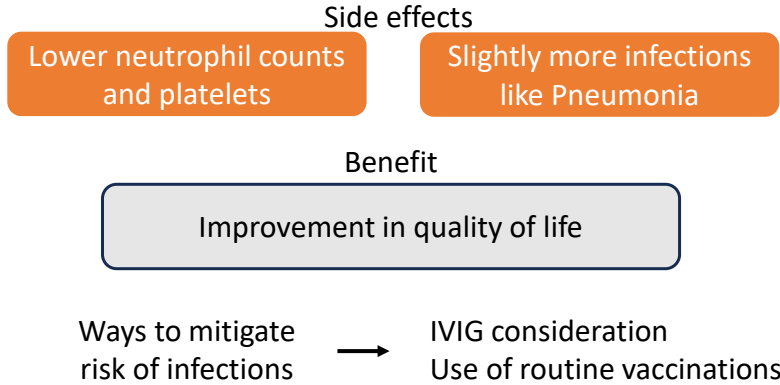
★ Dose reduction of dex does not appear to worsen outcomes in induction using double and triplets (prior to addition of Daratumumab in upfront therapy).

★ Dex is not needed as pre-med after first few cycle of daratumumab

Goals: Lower dose for toxicity + Minimizing unneeded steroids

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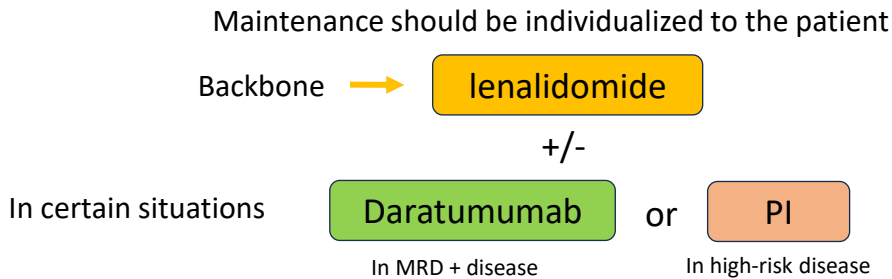
What About the Addition of Daratumumab in Induction



Facon et al Lancet Oncology 2021; Sonneveld et al, NEJM 2024; Perrot et al, JCO 2021

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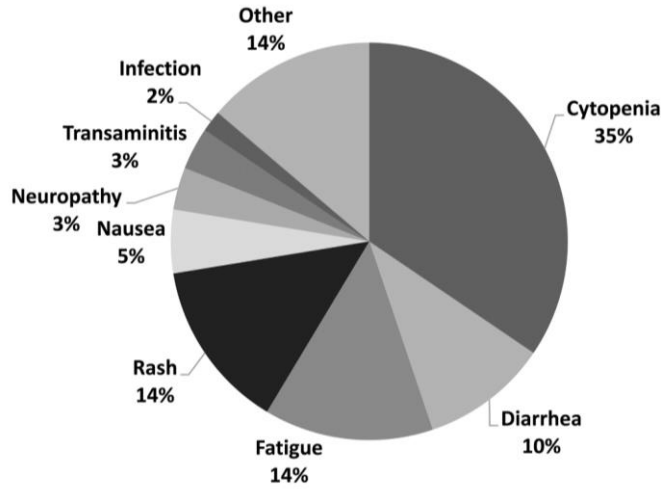
Maintenance: Continuous Therapy Usually for Several Years



Clinical trials are looking at stopping maintenance based on sustained minimal residual disease negativity

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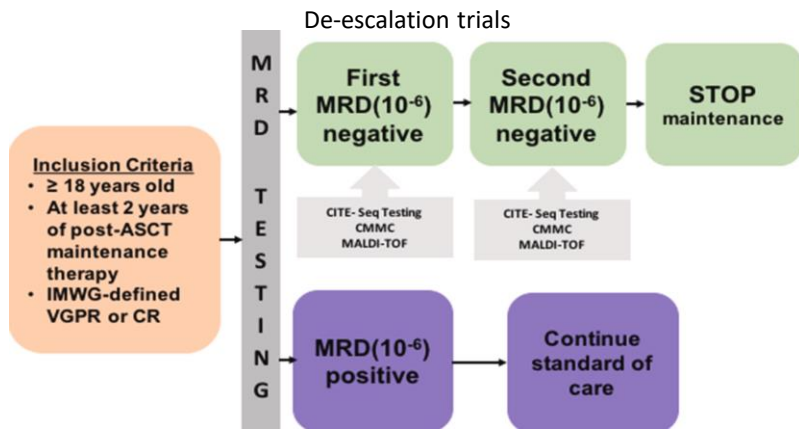
Reasons for Stopping Lenalidomide from Toxicity



Rath et al. Journal of Oncology pharmacy Practice 2023

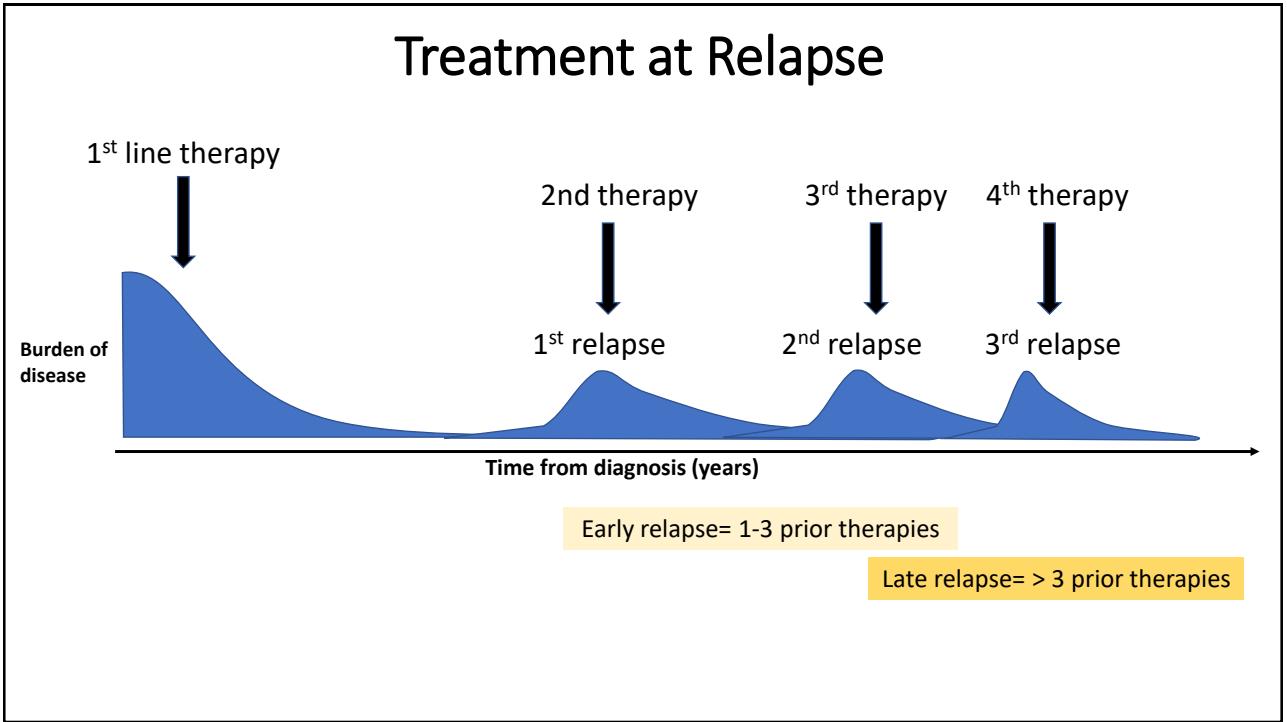
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Free from Maintenance Drug Therapy in Multiple Myeloma (The FREEDMM Trial)



Sweiss et al. Presented at ASH 2022

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Treatment at Relapse 3.5 Years Ago

Chose a different combination tailored to the individual

Cytosan

Dara
/Isa

Dexamethasone

Revlimid

Pomalyst

Elo

Velcade

Kyprolis

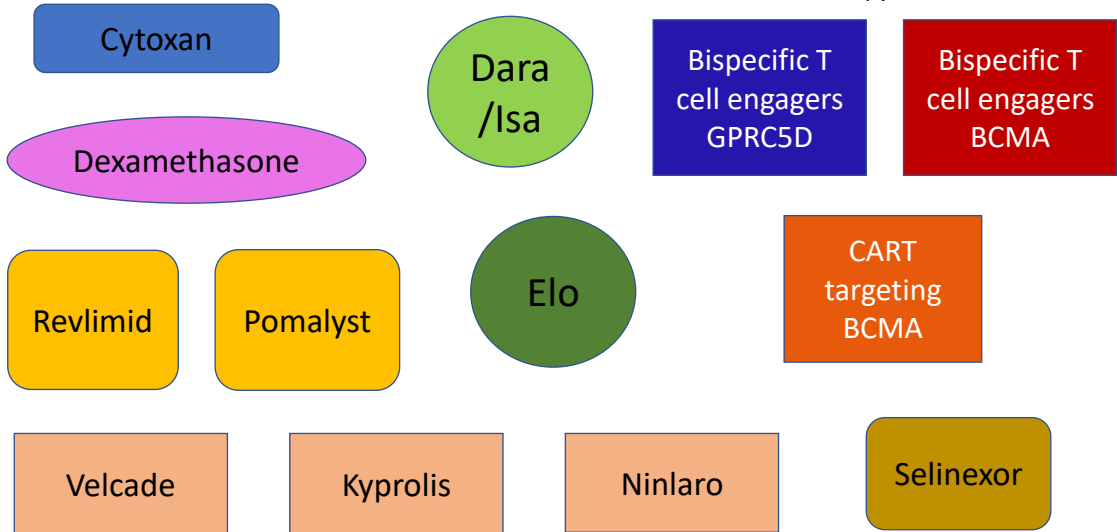
Ninlaro

Selinexor

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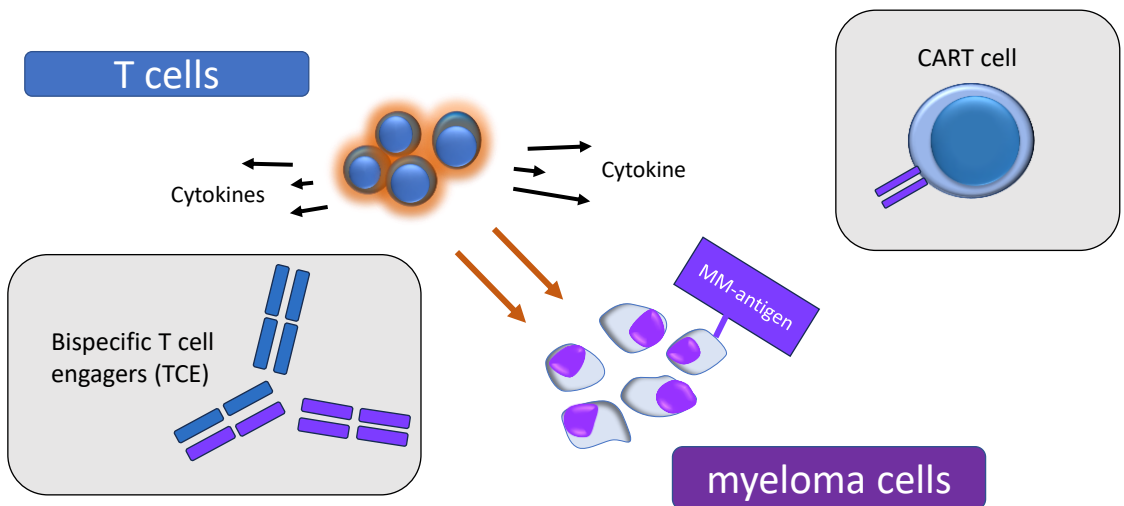
Treatment at Relapse Now

Chose a different combination or a T cell redirection therapy



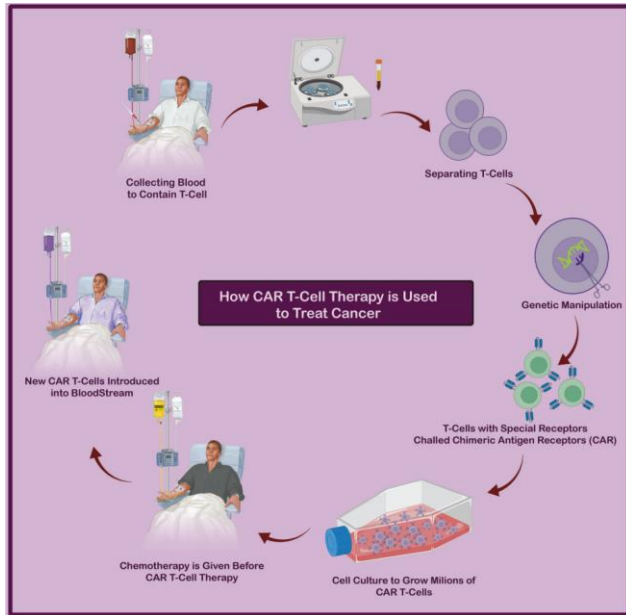
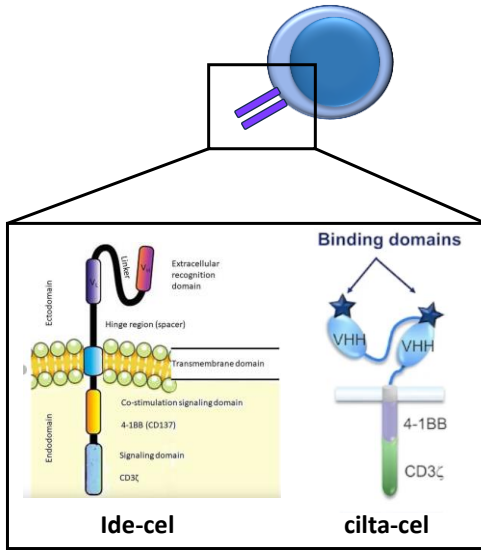
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The Era of T-cell Redirection Therapies (TRT)



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CART Logistics



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Administration Differences Between TCE and CART

Continuous therapy for bispecific TCE

Weekly or every 2 weeks depending on the TCE



One-time therapy for CAR T-cell therapy



Treatment free



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Common Targets Used to Redirect the T-cell

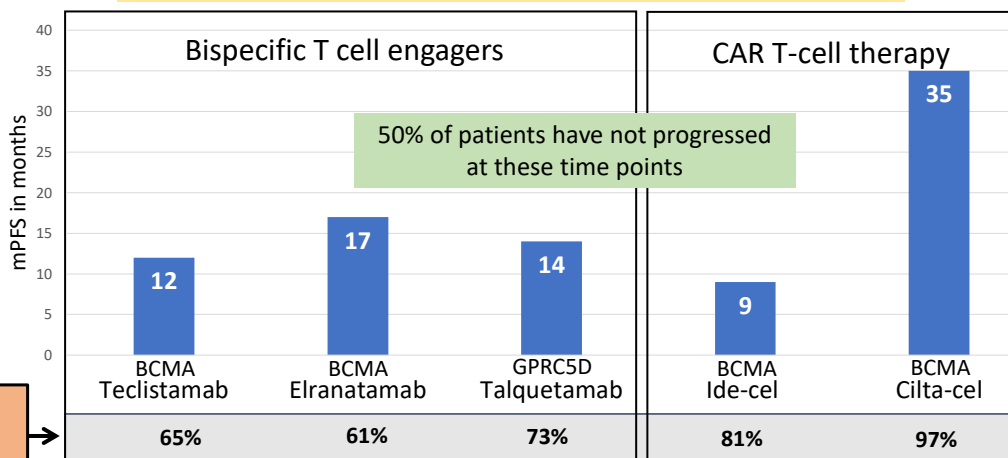
- **BCMA** is expressed on myeloma cells and B cells. It promotes plasma cell survival and is induced during plasma cell differentiation
- **GPRC5D** is expressed on myeloma cells, eccrine glands and hair follicles. Its role is not clear.
- There are more in clinical development

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Excitement of T-cell Redirection Therapy in Relapsed MM

Patients who have progressed 3 or more times

Historically 30% respond and usually progress within 6 m



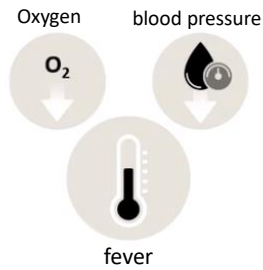
% of patients responding

Moreau et al NEJM 2022; Tomasson et al. ASH 2023; Munshi et al NEJM 2021, Lin et al, ASCO 2023; Lesokhin et al Nature Medicine 2023; Martin et al. JCO 2022.

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Common Side Effects with T-cell Redirection Therapies

CRS



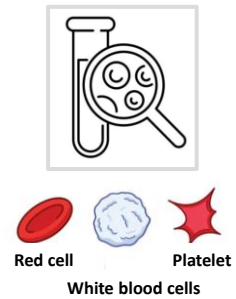
Neurologic



Infections



Low blood counts



Rodriguez-Otero et al. Lancet Oncology 2024

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Cytokine Release Syndrome



Signs and symptoms

- Fever
- Low blood pressure
- Hypoxia- low oxygen in the body
- Kidney injury
- Liver injury

Monitoring

- Hospitalization
- Outpatient monitoring programs in some centers

Treatment

Depends on severity

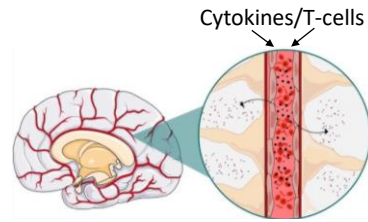
- Tylenol
- Tocilizumab +/- steroids
- Supportive care with IV fluids and nasal canula with oxygen

Predictable, treatable, reversible

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Neurologic Side Effects

Cytokines and T-cells cross the blood brain barrier



Signs and symptoms

- Headache
- Confusion
- Tremors
- Handwriting changes
- Attention changes
- Word finding difficulties
- Seizures (rare)

ICANS

Monitoring

- Hospitalization
- Outpatient monitoring programs in some centers
- Questions regarding orientation, attention, speech, writing: ICE score

treatment

- Depends on severity
- Steroids
 - Anti-seizure prophylaxis

Predictable, treatable, reversible

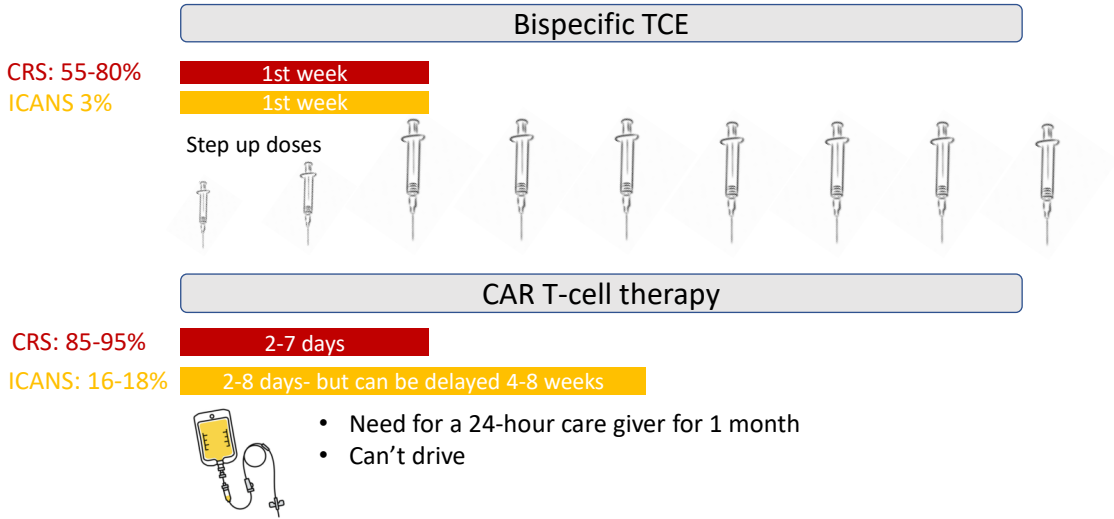
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Other Rare Neurologic Side Effects Seen with CAR T-cell Therapy

- NMT's- movement and neurocognitive changes that might not be reversible: seen in about 5%
- Cranial nerve palsy- about 6%

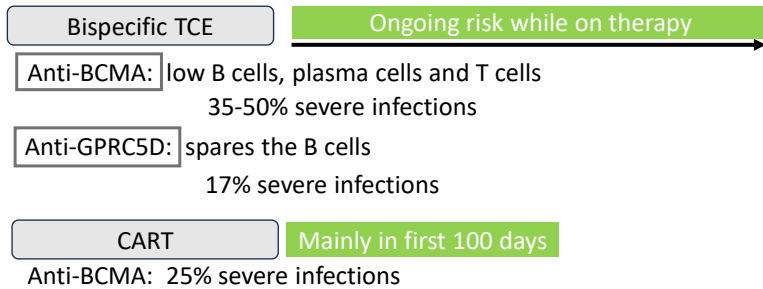
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Characteristics of CRS and ICANS with CART and Bispecific TCE



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Infections



Very low antibody production

Low T cell counts
Low B cells
Low plasma cells

Prevention strategies

- IVIG replacement
- Extend the dosing from every week to every 2 weeks for BCMA-directed TCE once deep response is achieved usually after 6 cycles (or earlier)
- Anti-viral prophylaxis
- PJP prophylaxis
- Treat severe neutropenia with GCSF
- Vaccinations-ideally prior to therapy/ revaccinate post CART

Cellerin E et al, ASH2023; vonde Donk, NWMJ, et al Lancet. 2023; Noopur et al. Clinical lymphoma, myeloma and leukemia. 2024

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Low Blood Cell Counts

Bispecific TCE

In the first 1-2 months

Platelets < 50 Neutrophils < 1000

Anti-BCMA	20-25%	50-65%
Anti-GPRC5D	11-23%	32-60%



Red cell Platelet

White blood cells
Particularly neutrophils and lymphocytes

CART

Most recover after 2 months

Platelets < 50: 50-60%
Neutrophils < 1000: 95%

Can persist past 2 months (< 30%)

Management

- Blood/plt transfusions
- Growth factors like GCSF
- Anti-infective prophylaxis when neutrophils are low

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Common GPRC5D-Related Side Effects

Oral side effects



Taste change/loss



Dry mouth

Skin and nail side effects



Skin peeling/Rash



Nail changes

Management

Biotin, hydration, salivary stimulants
Oral steroid solution
Referral to a nutritionist

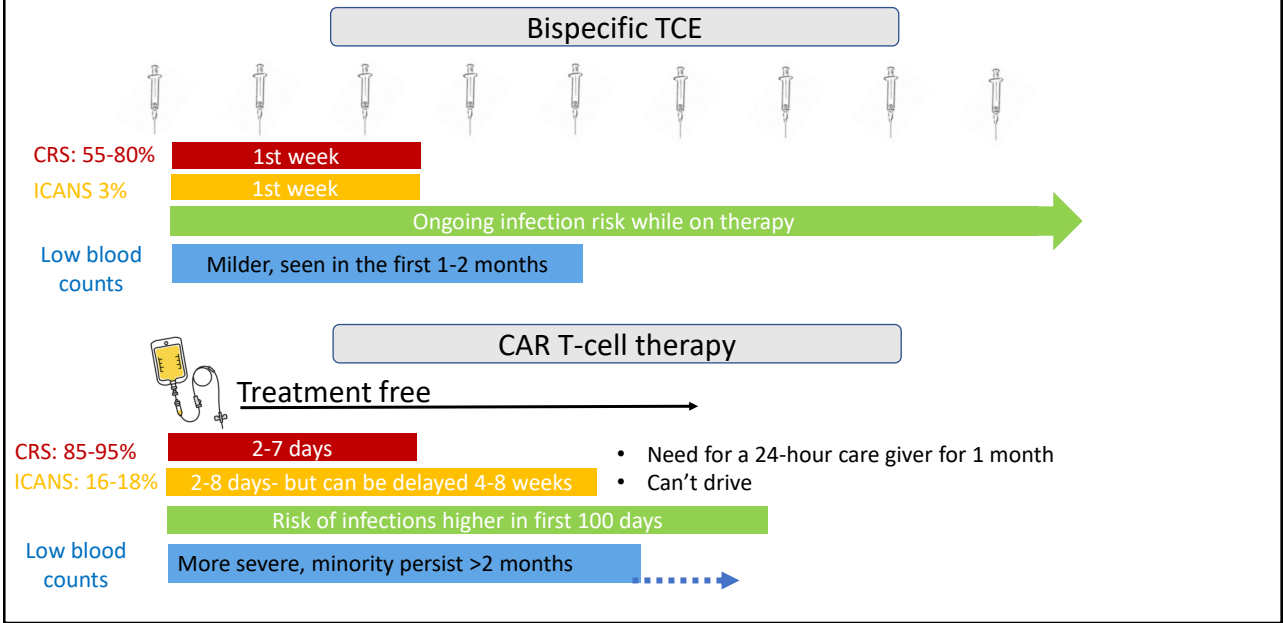
Topical moisturizers
Topical corticosteroids.



Dose reduction, holding or modification to every 4 weeks instead of 2 weeks improves side effects without negatively impacting duration of response

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Summary of Main Side Effects with TCE and CART



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Other Considerations to Improve Side Effects

CAR T-cell therapy

- Better bridging therapy to control disease prior to CART
- Giving CART earlier - now approved for early relapse (lower rates of CRS and ICANS)

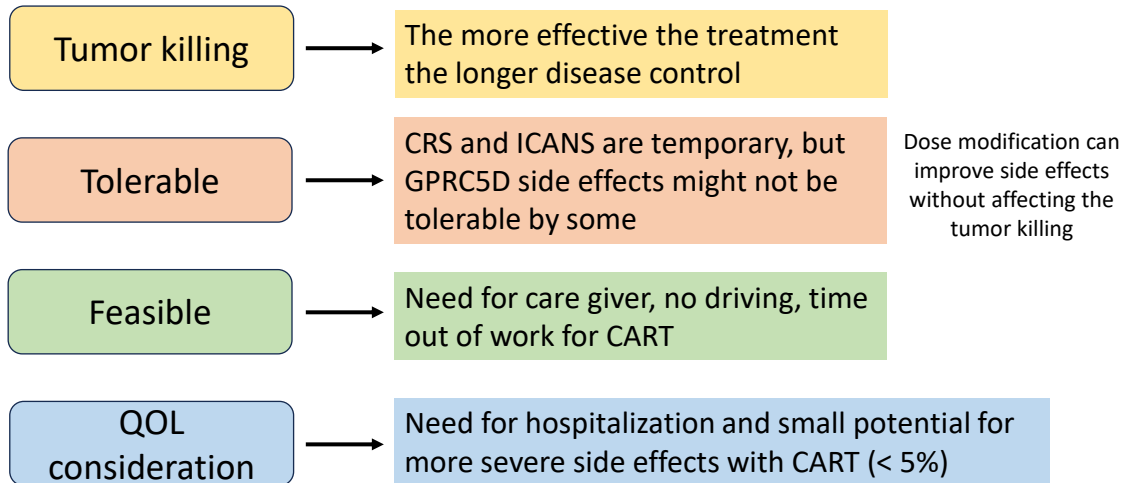
Bispecific TCE

- Extend intervals between doses:
 - Improve infectious risk
 - Improve GPRC5D related side effects
 - Reduced clinic visits
- Future studies looking at fixed duration of dosing

Cohen et al. Blood Cancer Journal, 2022; San Miguel et al NEJM 2023; Chakraborty et al. Blood Cancer Journal 2024

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How to Choosing Therapies for Relapsed Myeloma?



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Ways to Improve Quality of Life During the Myeloma Journey

- Talk to your oncologist about what your values and preferences in therapies
- Discuss new symptoms when they arise
- You have choices at relapse and important to fully understand the options
- Multi-disciplinary approach to pain management- palliative care team, physical therapy, neurosurgeon in some cases
- Social support- myeloma support groups, social work

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Conclusion

Myeloma therapy is improving

People are living longer

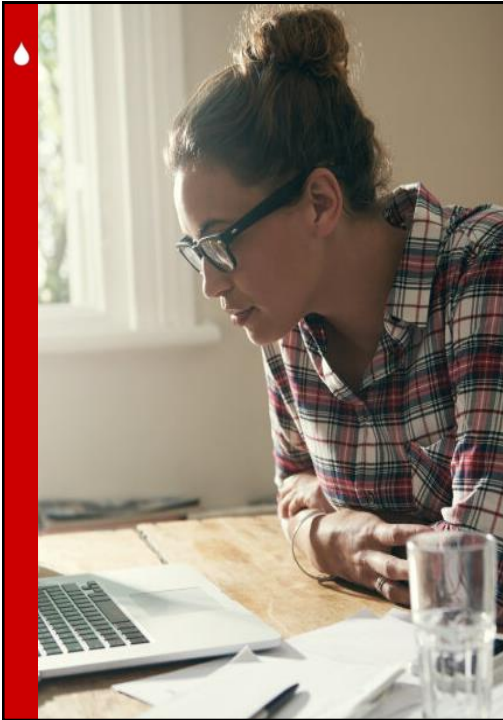
Individualized treatment strategies and modifications are important to minimize side effects and improve quality of life

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Thank You



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EMPOWERING MYELOMA PATIENTS: STRATEGIES FOR MANAGING SIDE EFFECTS?

Ask a question by **phone**:

Press star (*) then the number 1 on your keypad.

Ask a question by **web**:

Click "Ask a question"

Type your question

Click "Submit"

Due to time constraints, we can only take one question per person. Once you've asked your question, the operator will transfer you back into the audience line.



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Call: (800) 955-4572
Monday to Friday, 9 a.m. to 9 p.m. ET

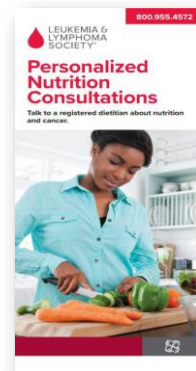
Chat live online:
www.LLS.org/InformationSpecialists
Monday to Friday, 10 a.m. to 7 p.m. ET

Email: www.LLS.org/ContactUs
All email messages are answered within one business day.

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www.LLSNutrition.org



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View our free education videos on disease, treatment, and survivorship. To view all patient videos, please visit www.LLS.org/EducationVideos



Patient Podcast

The Bloodline with LLS is here to remind you that after a diagnosis comes hope. To listen to an episode, please visit www.TheBloodline.org



LLS EDUCATION & SUPPORT RESOURCES

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LEUKEMIA & LYMPHOMA SOCIETY

Help With Finances

The Leukemia & Lymphoma Society (LLS) offers financial assistance* to help individuals with blood cancer.

The **LLS Patient Aid** Program provides financial assistance to blood cancer patients in active treatment. Eligible patients will receive a \$500 stipend. Visit www.LLS.org/PatientAid

The **Urgent Need** Program, established in partnership with Maggie's Love, helps pediatric and young adult blood cancer patients, or adult blood cancer patients who are enrolled in clinical trials, with acute financial need. The program provides a \$500 grant to assist with non-medical expenses, including utilities, rent, mortgage, food, lodging, dental care, child care, elder care, and other essential needs. Visit www.LLS.org/UrgentNeed

The **Susan Lang Pay-It-Forward Patient Travel Assistance** Program provides blood cancer patients a \$500 grant to assist with transportation and lodging-related expenses. Visit www.LLS.org/Travel

The **Co-Pay Assistance** Program offers financial support toward the cost of insurance co-payments and/or insurance premiums for prescription drugs. Visit www.LLS.org/Copay

*Funding for LLS Co-pay Assistance Program is provided by pharmaceutical companies. Funding for other LLS financial assistance programs is provided by donations from individual donors, companies, and LLS campaigns.

The Leukemia & Lymphoma Society (LLS) offers the following financial assistance programs to help individuals with blood cancers: www.LLS.org/Finances



To order free materials: www.LLS.org/Booklets





THANK YOU!

Please complete a short survey to provide us with your valuable feedback and to be entered to win a gift card: www.LLSeval.org

We have one goal: A world without blood cancers

