

An Indian Myeloma Academic Groupe Publication (IMAGe) -



Preface

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This newsletter was born out of sincere efforts of the **IMAGE Groupe** to serve a quarterly academic feast to all myeloma connoisseurs and novitiates with a platter of translational research work update, neuron tickling trivia, cherishable accomplishments of our members and highlights of past and upcoming academic events in the realm of myeloma. A blitzkrieg of brainstorming zoom sessions followed by pounding and grinding of intellect and prose by five geeks over weeks led to fruition of the first edition on new year eve and a greater hard work to bring forth this snippet on myeloma activities across country as second edition.

- From Editorial Team

This bulletin will be a ready reckoner for those grappling to keep up with the progress on myeloma. As it summarizes journal clubs that paved the way for the holy grail of truth based on evidence, the eagle eye gives the synopsis of the critical thinking prowess shown by the myeloma prodigies. The rest of the sections gives us a glance at what is happening around us. The team has done a spectacular job in putting this together. Of course, not to mention the turbocharger, Dr. Uday.

- Newsletter Committee



24th August 2023

"Inshorts-Through expert's lens" Journal Club



Dr. Annie Kanchan Baa MD, DM

Assistant Professor, Department of Medical Oncology, St. John's Medical College & Hospital, Bangalore

San-Miguel J, Dhakal B et al; Cilta-cel or Standard Care in Lenalidomide-RefractoryMultiple Myeloma.N Engl J Med. 2023 Jul 27;389(4):335-347. doi:10.1056/NEJMoa2303379. Epub 2023 Jun 5. PMID: 37272512.

Summary: The CARTITUDE-4 study was the first phase 3, open-label, randomized trial, evaluating the ciltacabtagene autoleucel (cilta-cel) in relapsed/refractory multiple myeloma. The efficacy and safety of cilta-cel, a CAR T-cell therapy targeting BCMA was compared to the physician's choice of standard therapy (pomalidomide, bortezomib, and dexamethasone or daratumumab, pomalidomide, and dexamethasone); in patients who were refractory to lenalidomide and had received 1-3 prior lines of therapy. Cilta-cel demonstrated superior progression-free survival (PFS) rates when compared with SoC (PFS at 12 months: 76% vs 49%), thus fulfilling the study's primary endpoint. The median PFS was not reached in the cilta-cel arm while it was 11.8 months in the standard arm (HR: 0.26; 95% CI: 0.18-0.38; P <.0001). The PFS benefit was observed across all patient subgroups. The overall response rates also significantly improved with cilta-cel(84.6% vs 67.3%, odds ratio-3; range:1.8-5; p<0.0001); with impressive complete response (CR) rates (72% vs 22%). The MRD negativity rates were higher with the CAR T cell therapy (60.6% vs 15.6%; odds ratio-8.7; p<0.0001).The haematological toxicities were the most common adverse events encountered in the cilta-cel group (grade 3/4: 94.2% vs 86.1%). The cytokine release syndrome(CRS) was seen in 76% of the CAR-T cell therapy cohort with grade ³/₄ observed in 1.1%. There were no fatal neurotoxicities (any grade 20%; grade ³/₄ -1.1%) documented, with cranial nerve palsy, ICANS and MNTs seen in 8%, 4.5% and 0.6% respectively.

Commentaries: Lenalidomide-refractory multiple myeloma often portends a poor prognosis with less than 12 months of median progression-free survival in real-world studies. This is a clear unmet need and is commonly seen in clinical practice. Cilta-cel therapy targeting BCMA was evaluated in this phase-3 study after promising results of CARTITUDE-1which explored cilta-cel in a heavily pretreated population (median 6 lines). Cilta-cel demonstrated superiority in numerous key outcomes. The hazard ratio for disease progression or death was 0.26, indicating a significant reduction in risk. The depth of response (ORRs and MRD negativity) was significantly higher with cilta-cel. The CAR T-cell-associated adverse events (CRS/ICANS/MNTs) were well managed with supportive care, as the majority were grade 3 or lower. The incidence and severity of the toxicities were lesser when compared with CARTITUDE-1. This suggests improved tolerability when used in earlier lines, making cilta-cel the "potential" new standard of care for patients with lenalidomide-refractory MM after first relapse. However, the ORR reported in CARTITUDE-1 was higher than that seen in CARTITUDE-4 (98% vs 84.6%). Long-term follow-up and PFS updates would shed light on the durability of response and help in the appropriate sequencing of available therapies.

"Inshorts-Through expert's lens" Journal Club



Dr. Nikhil M. Kumar MD, DM

Associate Consultant, Department of Hematology & BMT, Fortis Memorial Research Institute, Gurugram Nørgaard, J.N., Abildgaard, N., Lysén, A. et al. Intensifying treatment in PET-positive multiple myeloma patients after upfront autologous stem cell transplantation. Leukemia 37, 2107–2114 (2023).https://doi.org/10.1038/s41375-023-01998-7

Summary: Multiple myeloma is a plasma cell dyscrasia with heterogenous treatment outcomes. Induction chemotherapy followed by autologous stem cell transplant remains the standard of care. PET-CT scan is highly sensitive in detecting residual disease in myeloma patients post autologous stem cell transplant (ASCT) and is complimentary to bone marrow MRD assessment. PET positivity after autologous transplant is strongly correlated with inferior PFS and OS. Additional treatment in PET positive patients post-transplant may improve outcomes. This phase 2 study enrolled 159 patients who had a VGPR or better post ASCT and screened them with PET-CT scan. A total of 53 patients (33%) were PET positive and 57% of PET-positive patients were MRD negative, demonstrating that these response assessments are complementary. PET-positive patients received four 28-day cycles of carfilzomib-lenalidomide-dexamethasone (KRd). Flow cytometry-based MRD analysis was performed before and after treatment. Around one third (33%) of the PET positive patients turned PET negative after KRd consolidation and MRD negative patients were more likely to convert than MRD positive patients.

Thus, combining PET-CT scan and MRD assessment by bone marrow is a sensitive technique to detect residual disease post-transplant. KRd consolidation in PET positive patients could improve outcomes.

Critical Appraisal

This study has looked at whether intensifying treatment in PET positive patients post-transplant improves outcomes. Induction chemotherapy pre-transplant is not uniform in this study. Neither is the timing of PET-CT scan post-transplant standardised. Also, its unclear whether patients have received any additional treatment after ASCT prior to getting a PET-CT done. Baseline PET-CT scan for comparison was also lacking. This is a single arm study with short duration of follow-up. A randomised control trial with longer duration of follow up is warranted to ascertain whether intensifying treatment in PET positive patients post-transplant would improve outcomes.



"Inshorts-Through expert's lens" Journal Club



Dr. Faheema Hasan MD, DM

Associate Professor & Consultant Hemato-oncologist, Department of Hematology. United Institute of Medical Sciences, Prayagraj Birtamimab plus standard of care in light-chain amyloidosis: the phase 3 randomized placebo-controlled VITAL trial

Summary: AL amyloidosis is a rare progressive, and fatal disease caused by amyloid deposition leading to organ dysfunction and failure. Clonal plasma cells produces immunoglobulin lightchain that misfolds, forms toxic aggregates and deposits as amyloid in vital organs, most commonly the heart Current therapies available target the clonal plasma cells but not the pre formed amyloid fibrils and has not significantly improved survival in patients with stage 4 AL amyloidosis. Birtamimab is the first drug to produced survival benefit in these patients with risk of early mortality. It is a form of amyloid depleter therapy that promotes clearance of amyloid deposits via phagocytosis. VITAL trial is a the first randomized, placebo-controlled phase 3 trial of an amyloid-depleter therapy combined with SOC chemotherapy in patients with AL amyloidosiswith cardiac involvement. The trial was stopped early after the results of a futility analysis that suggested the primary end point was unlikely to be met. But post hoc efficacy analyses showed that in patients with Mayo stage IV AL amyloidosis, significant improvement in survival with birtamimab + SOC was observed at 9months.

Critical Appraisal:

- Though this is the first trial that has demonstrated a survival benefit in patients with Mayo stage IV AL amyloidosis with a favourable risk benefit profile, the statistical analysis must be viewed with great caution, as the VITAL trial was not designed for this analysis and that post-hoc data analyses conform to neither the population nor the randomization model of statistical inference, so the promising data could be nothing more than simple coincidence. The survival curves separating the lines way early either shows that birtamimab is a game changing treatment or just a mere chance and hence we need more number of patients and longer duration to ascertain its efficacy.
- But on the positive side, this post HOC analysis suggesting survival benefit in Mayo stage IV AI amyloidosis has led to the AFFIRM-AL study is designed to confirm the survival benefit observed in the VITAL study in these high risk patients.

28th December 2023

"Inshorts-Through expert's lens" Journal Club

Dr. Asish Rath Associate Consultant, Laboratory Hematology Tata Medical Center, Kolkata Impact of cytogenetic abnormalities on treatment outcomes in patients with amyloid light-chain amyloidosis: subanalyses from the ANDROMEDA study

Summary: This study is a post hoc analysis of the ANDROMEDA study, which is a randomized, open-label, active-controlled, multicenter, phase-3 study in newly diagnosed patients of AL amyloidosis. 388 patients were randomised 1:1 to D-VCd or VCd, of whom 321 had cytogenetic testing available. Assessment of cytogenetic abnormalities was based on fluorescence in situ hybridisation (FISH) and/or karyotyping. Clinical outcomes in patients with t(11;14), del17p13, del13q14, and amplq21 was evaluated. t(11;14) was the most common cytogenetic abnormality. Rates of hematologic CR and organ responses were higher in D-VCd across all cytogenetic sub- groups. In the VCd group the rates of hematologic CR was numerically lower in presence of amplq21 and t(11;14). This study validated the results of previous studies which showed poor deep responses with VCd therapy in AL amyloidosis patients with cytogenetic abnormalities and further strengthening the role of cytogenetic evaluation in AL amyloidosis patients.

Critical Appraisal: The study evaluated the role of cytogenetic abnormalities in AL amyloidosis patients receiving D-VCd vs VCd therapy. The superiority of daratumumab based regimen in AL amyloidosis irrespective of cytogenetic abnormalities was highlighted. The study results have provided an insight to a cytogenetic testing-based treatment approach in amyloidosis patients.

The sub-group analysis had small sample sizes. Particularly del17p13 had only 9 cases in each treatment arm. Cytogenetic analysis was performed locally and not centrally which may lead to analyses biases. Karyotyping was also used to detect abnormalities which may not be an optimal test and may have affected sensitivity too owing to patchy nature of the disease and presence of small number of plasma cells. Another limitation of the study is a short median follow-up of 20.3 months.





Dr. Hamza Dalal

Consultant Hematologist, Fortis Institute of Blood Disorders, Mumbai.

Bortezomib-Dexamethasone, Rituximab and Cyclophosphamide as First-Line Treatment for Waldenstrom's Macroglobulinemia - A Prospectively Randomized Trial of the European Consortium for Waldenstrom's Macroglobulinemia

25th January 2024

(ECWM – 1 study)

Summary:

The European consortium for Waldenstroms Macroglobulinemia (EWCM) conducted a two-armed randomised prospective trial to evaluate Bortezomib-Dexa-Cyclophosphamide-Rituximab (V-DRC) regimen versus DRC regimen for newly diagnosed treatment naïve patients with WM/LPL. This study was published in the Journal of Clinical Oncology on 10th February 2023.

The Rationale for the study was to identify a fixed duration CIT regimen with high rates of response and acceptable toxicity profile. 202 patients were randomized in 1:1 manner. Arm 1 (DRC arm) included subcutaneous rituximab (1400mg SC on day 1), dexamethasone (20mg on day 1) and cyclophosphamide (100mg/m2) from day 1-5 in each 28 day cycle. Arm 2 had Bortezomib (1.6mg/m2 SC) x 3 weekly doses in addition to DRC Backbone.

Primary end point was PFS and secondary end points included response depth, response kinetics and OS. Median age in both age groups was 68 years with 80% patients above the age of 65 years although majority had good ECOG score. About half the patients belonged to high risk ISSWM group with median IGM level of 3.1gm/dl. As the study was initiated prior to routine MYD88 testing, a drawback of the study was incomplete availability of mutation data.

V-DRC showed a statistically non-significant PFS benefit as compared to DRC (80.6% vs 72.6%). Improvement in ORR, VGPR and CR rates were also seen in V-DRC arm but OS benefit could not be demonstrated due to short follow-up. Main adverse events were manageable but incidence of infection and neuropathy in V-DRC group was twice that in DRC group. The authors concluded that V-DRC was an effective option in this subset of patients with acceptable toxicity profile.

Critical Appraisal:

The ECWM-1 study was initiated at a time when management options for WM/LPL included chemo-immunotherapy regimens like BR, DRC and CyBorD. These regimens achieved good Overall response but did not improve OS. Unlike Follicular lymphoma, addition of maintenance rituximab was a failure in improving PFS in patients with LPL.

The objective of this study was to understand if addition of Bortezomib could improve and deepen the response rates to available therapy without undue toxicity. The study accrual although initially fast paced, slowed down considerably after approval for Ibrutinib in the management of elderly patients with WM/LPL. This goes to show the difficulties in conducting trials for rare diseases like WM. Another major drawback of this study was that the trial was initiated when routine MYD88 / CXCR4 testing was not practised. Hence only patchy mutation data is available precluding meaningful results on the basis of this stratification. Further studies will be need to elucidate the impact on MYD88 and CXCR4 mutation on outcomes with V-DRC regimen.

Although primary end point was achieved, it was not statistically significant. Whether this regimen will hold up against powerful targeted therapy drugs like BCL2 and BTK inhibitors need to be seen. The Non-availability of SC rituximab in India is a hindrance to adoption of study protocol for use in India. Lastly, incidence of neuropathy amongst study participants was significant and did lead to substantial treatment discontinuations.



"Inshorts-Through expert's lens" Journal Club



Dr. Aishwarya Muralidharan

Academic Senior Resident, Department of Hematology, SGPGI, Lucknow Ibrutinib and venetoclax as primary therapy in symptomatic, treatment-naïve Waldenström macroglobulinemia Castillo et al

22nd February 2024

Summary:

A multicentre, single-arm, prospective phase 2 trial held in Dana-Farber Cancer Institute (DFCI), Massachusetts General Hospital, and Beth Israel Deaconess Medical Centre in Boston, Massachusetts studied the efficacy of ibrutinib with venetoclax in WM in an upfront setting. patients were enrolled from July 2020 to January 2022 and Data was collected till 31 may 2023. Previously untreated WM meeting the IWWM2 criteria for therapy were enrolled. Primary endpoint was assessment of VGPR(a surrogate marker for OS). 45 patients were enrolled and therapy was given in an OPD setting comprising of 28 day cycles. First cycle was ibrutinib monotherapy and subsequently venetoclax was added from cycle two with TLS prophylaxis. At best response 19 participants (42%) attained a VGPR, 24 (53%) a PR, and 2 (4%) a minor response. CXCR4 mutations were associated with a numerically, but not statistically significant, lower VGPR rate (29% vs 50%; P = .15. Grade ≥ 3 adverse events observed in more than 1 participant were neutropenia, mucositis, diarrhea, laboratory tumor lysis syndrome, and atrial fibrillation Two grade 5 and 1 grade 4 ventricular arrhythmia lead to early termination of study.

Commentary:

MYD88 mutation is seen in 90% of Waldenström macroglobulinemia. This mutation leads to its constitutive dimerization this causes downstream activation of NFkB, which leads to proliferation and cell survival. This also causes BTK activation via an B cell receptor independent pathway. The efficacy of ibrutinib has been established in previous studies in both relapsed refractory and now in front line settings in WM. There is a significant difference in response with CXCR4 mutated patients performing poorly as compared to unmutated. Bcl2(antiapoptotic marker) is overexpressed in lymphoplasmacytic cells with MYD88 irrespective of CXCR4 mutation status. Hence the efficacy of this combination theray. It's an all oral and fixed duration and chemotherapy free and the VGPR rate reported is higher than that for both Ibrutinib monotherapy in the frontline setting and venetoclax monotherapy in the relapsed setting. Provides fast response with effective bone marrow clearence. The cost considerations and safety profile are yet to be established. Trials with newer noncovalent BTKi are ongoing which in studies have shown a better safety profile.

"Inshorts-Through expert's lens" Journal Club



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(Clinical Hematology)

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Oubari S, Hegenbart U, Schoder R, Steinhardt M, Papathanasiou M, Rassaf T, Thimm A, Hagenacker T, Naser E, Duhrsen U, Reinhardt HC, Kortum M, Agis H, Schonland S, Carpinteiro A. Daratumumab in first-line treatment of patients with light chain amyloidosis and Mayo stage IIIb improves treatment response and overall survival. Haematologica. 2024 Jan 1;109(1):220-230. doi: 10.3324/haematol.2023.283325. PMID: 37439344; PMCID: PMC10772504.

Summary:

The prognosis of patients with Mayo stage IIIb light chain amyloidosis remains very poor and treating this subset of patients is definitely challenging. The ANDROMEDA trial that led to approval of Daratumumab in combination with bortezomib-cyclophosphamide dexamethasone, had excluded Mayo Stage IIIb light chain (AL) amyloidosis patients. A post-hoc analysis showed that patients with cardiac involvement (up to Mayo stage Illa) were the ones who benefited most from the addition of daratumumab to standard chemotherapy. This retrospective, multicentre study enrolled 119 patients with histologically diagnosed AL Amyloidosis and Mayo stage IIIb, presenting between 2016 to 2022 at four different sites in Germany and Austria, to evaluate the addition of daratumumab to the first line therapy. Twenty seven patients received an upfront treatment including daratumumab, 63 a bortezomib based regimen without daratumumab, eight received therapies other than daratumumab or bortezomib and 21 pre-treated patients or deceased prior to treatment were excluded. In the daratumumab group, median overall survival was not reached after a median follow-up time of 14.5 months, while it was significantly worse in the bortezomib- and the otherwise treated group (6.6 and 2.2 months, respectively) (P=0.002). Overall hematologic response rate at 2 and 6 months was better in the daratumumab group compared to the bortezomib group (59% vs. 37%, P=0.12, 67% vs. 41%, P=0.04, respectively). Landmark survival analyses revealed a significantly improved overall survival in patients with partial hematologic response or better, compared to non-responders. Cardiac response at 6 months was 46%, 21%, 0% in the daratumumab-, bortezomib- and otherwise treated groups, respectively (P=0.04). A landmark survival analysis revealed markedly improved overall survival in patients with cardiac very good partial response vs. cardiac non-responders (P=0.002).

Commentaries:

This study demonstrates for the first time the superiority of an upfront treatment with daratumumab over standard-of-care in stage IIIb AL amyloidosis. Daratumumab-containing regimens seem to be an effective and tolerable treatment option for patients with Mayo stage IIIb in the first-line setting, potentially representing a step forward in the treatment of this group of patients. Being a retrospective study, the unavailability of a few clinical parameters or response data in some patients seemed to be a limitation. Therapy-associated side effects were not systematically recorded as well. The better survival rates in the group treated with daratumumab suggests its efficacy and safety profile in this vulnerable patient population. Further randomized trials should be conducted to confirm the data and to define the best sequence of daratumumab combination therapies.

Identify the incorrect statement wnt to myeloma bone disease

- A. Bone disease is the most frequent disease-defining clinical feature of multiple myeloma (MM), with 90% of patients developing bone lesions over the course of their disease
- B. Approximately half of patients with myeloma bone disease will experience skeletal-related events (SREs), such as spinal cord compression and pathologic fractures, which increase the risk of mortality by 20-40%
- C. For a lytic lesion to become apparent, it requires losing more than 30% of trabecular bone.
- D. Wnt signaling pathway inhibitor Dickkopfl (DKKI) secreted directly from tumor PCs inhibits osteoclasts.
- E. Pamidronate was the first BP to show a clinical benefit in MM

In the Phase 2 Magnetism MM-3 trial, after six cycles, persistent responders were switched to a dosing interval of once every 2 weeks (Q2W). Which one of the following best defines a persistent responder as per trial design ?

- A. Partial response (PR) or better lasting at least 2 months
- B. ≥ VGPR lasting atleast 3 months
- C. Partial response (PR) or better lasting at least 3 months
- D. ≥ VGPR lasting atleast 2 months

Oct 2023

NNF

Dr. Sumeet

Mirgh

Asst Professor, <u>TMH, ACTR</u>EC,

Mumbai

In the Phase 2 Magnetism MM-3 trial which of the following was the most common primary reason for permanent treatment discontinuation ?

- A. Progressive disease
- B. Infectious complications

- C. Death
- D. Patient request

Which of these options is incorrect with regards to the design of CONPET study ?

- A. Only patients who had achieved at least VGPR, were eligible for inclusion
- B. PET was done at a uniform time point of D + 90 post ASCT in all patients.
- C. PET was considered positive if the Deauville score was 4 or higher.
- D. Two experienced nuclear medicine radiologists at two centers evaluated all the PET examinations centrally

Which of these options is incorrect with regards to the findings of the CONPET study assessing the impact of PET adapted treatment in MM ?

- A. Almost 60 percent of PET positive patients were MRD negative by FCM.
- B. KRd consolidation converted 33% of PET-positive patients into PET negativity.
- C. MRD negative patients were more likely to convert to PET negative state post KRD consolidation than MRD-positive patients.
- D. Numerically, more patients with previous VCd induction than VRd induction converted from PET Positive to PET negative.

Diagnosis of Systemic AL Amyloidosis as per IMWG criteria includes all of the following except

- A. Presence of an amyloid-related systemic syndrome
- B. Positive amyloid staining by Congo red in any tissue
- C. Evidence that amyloid is light-chain-related established by direct examination of the amyloid using mass spectrometry-based

proteomic analysis, or immunoelectron microscopy

- D. Evidence of a monoclonal plasma cell proliferative disorder
- E. All the above criteria are mandatory as per IMWG criteria (so no exceptions)

A patient with systemic amyloidosis (including GI) has these waxy-raised hemorrhagic lesions below the nose, around the lips, and eyes. What is the diagnosis?

- A. Herpes Zoster
- B. Herpes Simplex
- C. Amyloid deposits

- D. Vitamin deficiency due to Amyloid Gastropathy
- E. Molluscum contagiosum

All the following are the used in Mayo 2012 staging for AL Amyloidosis except ?

- A. Troponin
- B. BNP
- C. dFLC

- D. SFLC ratio
- E. All are components of staging (so no exception)

Nov 2023

NNI

Dr. Bipin Francis

Jubilee Mission

Medical College,

Thrissur, Kerala

Clinical trials may be stopped for futility if there is little or no chance of demonstrating the hoped-for effect. Reasons include all except:

- A. Evidence of no treatment effect by scheduled interim analysis
- B. Substantial missing data that would unacceptably undermine trial conclusions
- C. Event rates too low to support meaningful comparisons
- D. Lack of funding/ finances for continuing the trial
- E. All of the above are part of the futility analyses; thus no exceptions from the above options

VITAL trial on the role of Birtamimab has shown benefit in post-hoc analysis in which patients?

- A. Benefit in the percentage of all-cause mortality (ACM) in Stage IV AL amyloidosis
- B. Benefit in time to ACM in stage IV AL amyloidosis
- C. Benefit in time to ACM in all stages of AL amyloidosis
- D. Benefit in the primary composite endpoint (time to ACM or centrally adjudicated cardiac hospitalization ≥91 days) in Stage IV AL amyloidosis
- E. Benefit in the primary composite endpoint (time to ACM or centrally adjudicated cardiac hospitalization ≥91 days) in all stages of AL amyloidosis

The term "Amyloid" was brought into the scientific literature by :

- A. German botanist Matthias Schleiden
- B. German pathologist Rudolf Virchow
- C. German chemist Herman Bennhold
- D. German psychiatrist Aloysius (Alois) Alzheimer

D. Only WM patients with ECOG

included in the study.

E. All are correct statements.

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Identify the incorrect statement wrt to the protocol of the study by Buske et al evaluating B+ DRC in WM :

- A. Rituximab 375mg/m2 IV was used in both arms for all 6 cycles
- B. Subjects with ≥ Grade 2 neuropathy were excluded from study population.
- C. An effect size of 15 % improvement in PFS was assumed to calculate the sample size.



Which of these statements is incorrect wrt to findings of study by Buske et al evaluating B+ DRC in WM ?

- A. At the end of treatment, B-DRC and DRC induced major responses in 80.6% versus 69.9%.
- B. The median time to first response was shorter for B-DRC with 3.0 vs 5.5 m for DRC
- C. ≥ Grade 3 adverse events occurred more commonly in the B-DRC arm and neuropathy was the most common reason for drug discontinuation.
- D. One patient in the B-DRC arm achieved a CR while none achieved CR in DRC arm

Which of these statements is incorrect wrt to WM?

- A. Extramedullary infiltration is commonly seen involving liver, spleen and lymph nodes.
- B. Bulky lymphadenopathy and massive hepatosplenomegaly are rare findings.
- C. Paratrabecular infiltration by lymphoplasmacytic cells is the hallmark of WM in bone marrow biopsy specimens.
- D. All are correct statements.

Which of the following statement regarding response rates to Talquetamab in specific myeloma subgroups is incorrect wrt to findings of the MonumenTAL trial ?

- A. Unlike IgM myeloma ; plasma cells in WM are positive for CD 19 and CD 45 and negative for CD56 and CD 117.
- B. CXCR4 mutation is associated with aggressive disease and poorer response ot therapy.
- C. The most common cytogenetic abnormality seen in WM is 6q deletion and is associated with reduced PFS.
- D. Cold agglutinins develop in ~ 5% cases of WM and hemolytic anemia is evident in ~ 1% cases

Jan 2024 WINNER

Dr. Swapnil Tripathi

Senior Resident, Hematology, AIIMS, New Delhi

Which of the following is an incorrect statement regarding the Swedish physician Jan Waldenstrom?

- A. Waldenström studied organic chemistry with Hans Fischer at the Technical University of Munich
- B. In 1937, he defended a landmark PhD thesis on acute intermittent porphyria.
- C. He initially desribed cases of WM as 'purpura hyperglobulinemica'
- D. He described the first case of carcinoid syndrome and chronic active hepatitis in medical literature

Identify the incorrect statement wrt to the protocol of the study by Castillo et al evaluating Ibrutinb + Ven in WM :

- A. All treatments were administered orally in an outpatient setting
- B. Venetoclax was introduced from cycle 2 only
- C. G CSF support was permitted only when absolute neutrophil count < 500µl
- D. BM aspiration and biopsies were obtained at baseline and at 6, 12, and 24 months
- E. All are correct statements.



Which of these statements is incorrect wrt to the trial results by Castillo et al evaluating Ibrutinb + Ven in WM?

- A. The most common Grade 3 adverse event in the study arm was neutropenia.
- B. Two Grade 5 adverse events were reported in the trial
- C. he responses were fast, with a median time to minor and major response of 0.9 and 1.8 months, respectively.

Feb 2024

NNF

Dr. Harish Chandra Yadav

NSC Government

Medical College, Khandhawa

D. 3 cases of clinical TLS were seen in the trial and none required RRT

MYD88 mutation L265P is not a common association with which of these disorders

- A. Splenic Marginal Zone Lymphoma
- C. MALT Lymphoma D. IgM amyloidosis

- B. IgM Myeloma
 - Which of these statements is incorrect wrt International Prognostic Scoring System for Waldenström

Macroglobulinemia?

- A. IPSS to be used only for patients who require treatment for WM
- B. Serial measurements of β2 microglobulin are not useful in monitoring therapy.
- C. Age is the most powerful predictor of outcome
- D. LDH and IgM levels > 5000mg/dl are predictors of early mortality in WM as per IPSS

Which of the following was not an exclusion criteria in the trial which used the study protocol shown?

- A. A. Previous or current diagnosis of symptomatic multiple myeloma
- B. Planned stem cell transplant during the first
 6 cycles of protocol therapy
- C. Grade 1 painful peripheral neuropathy
- D. Supine systolic blood pressure < 100 mmHg



Identify the diagnostic modality being shown in the image which is a good value addition in assessing organ dysfunction in amyloidosis.

- A. Four-chamber strain imaging using speckle-tracking echocardiography
- B. Tc 99m pyrophosphate map
- C. Cardiac MRI TI mapping
- D. Cardiac SPECT tracing



Mar 2024

NN

Dr. Ramesh B.

Meenakshi Mission Hospital, Madurai,

Tamil Nadu

Which of these statements is incorrect wrt to the OS results by Sara et al evaluating role of Daratumumab in Mayo stage IIIB AL amyloidosis ?

- A. OS was calculated from the date of treatment initiation to death or loss of follow-up or to the date of heart transplantation.
- B. The median OS was 6.6 m in the bortezomib group, 2.2 m in the group treated with other regimens, but was not reached in the daratumumab group
- C. The 6- m OS in the daratumumab group, bortezomib group, and the group treated with other regimens was 70%, 51% and 25%, respectively
- D. In regression analysis, dFLC ≥500 mg/L or NTproBNP ≥16,000 pg/mL predicted OS in the Mayo IIIb cohort

Which of these statements is incorrect wrt to the response rates results by Sara et al evaluating role of Daratumumab in Mayo stage IIIB AL amyloidosis ?

- A. None of the patients achieved a cardiac CR in any of the treatment arms
- B. Patients in the daratumumab group were more likely to have a cardiac VGPR than those in the bortezomib group
- C. The 12-m OS was 100% in patients who achieved a cardiac VPGR or cardiac PR, compared to 73% in cardiac non-responders
- D. The benefit of adding daratumumab to first-line therapy appeared to increase relatively with increasing NTproBNP across all levels

Subgroup analysis of overall survival in patients with AL amyloidosis and Mayo stage IIIb favoured Daratumumab in all subsets except ?

- A. NT proBNP ≥ 25000pg/ml
- B. dFLC ≥ 180 mg/l

- C. GFR ≥ 30 ml/min/1.73m2
- D. Proteinuria > 5g/24h



Oct 2023

ANSWER MYELOMA QUIZ: OCT 2023 - MAR 2024

Q1 & Answer

Identify the incorrect statement wnt to myeloma bone disease

Wnt signaling pathway inhibitor Dickkopfl (DKKl) secreted directly from tumor PCs inhibits osteoclasts.

Explanation : Wnt signaling pathway inhibitor Dickkopfl (DKKI) secreted directly from tumor PCs inhibits osteoblasts and not osteoclasts. Malignant plasma cells in MM severely disturb this system by secretion of Wnt antagonists in the BM microenvironment. This skews the balance toward osteogenic bone resorption and results in development of the characteristic osteolytic bone lesions.

Q2 & Answer

In the Phase 2 Magnetism MM-3 trial, after six cycles, persistent responders were switched to a dosing interval of once every 2 weeks (Q2W). Which one of the following best defines a persistent responder as per trial design ?

Partial response (PR) or better lasting at least 2 months

Explanation : Ref : Lesokhin AM et al. Elranatamab in relapsed or refractory multiple myeloma: phase 2 MagnetisMM-3 trial results. Nat Med. 2023 Sep;29(9):2259-2267. doi: 10.1038/s41591-023-02528-9.

🗕 Q3 & Answer 🔸

In the Phase 2 Magnetism MM-3 trial which of the following was the most common primary reason for permanent treatment discontinuation ?

Progressive disease

Explanation : About 95 percent of trial participants discontinued treatment on trial due to disease progression and not adverse events.

Q4 & Answer 🔸

Which of these options is incorrect with regards to the design of CONPET study ?

PET was done at a uniform time point of D + 90 post ASCT in all patients.

Explanation : No unfoitrm time point for PET in this prospective study. The median time from transplant to screening with PET was 146 days (IQR : 103-186d)

Q5 & Answer

Which of these options is incorrect with regards to the findings of the CONPET study assessing the impact of PET adapted treatment in MM?

Numerically, more patients with previous VCd induction than VRd induction converted from PET Positive to PET negative.

Explanation : More patients with previous VRd induction than VCd induction converted from PET positive to PET negative disease



ANSWER MYELOMA QUIZ : OCT 2023 - MAR 2024

Q6 & Answer

Diagnosis of Systemic AL Amyloidosis as per IMWG criteria includes all of the following except

All the above criteria are mandatory as per IMWG criteria (so no exceptions)

Explanation : Rajkumar SV, Dimopoulos MA, Palumbo A, et al. International Myeloma Working Group updated criteria for the diagnosis of multiple myeloma. The Lancet Oncology. 2014 IMWG diagnostic criteria for Systemic AL Amyloidosis

- Presence of an anyloid velated systemic syndrome
 is g. most happen; contract patrotrinastinal tract, or periphenal nerve in:
 Prestive amyloid stabiling by Congo red in any teace
 is g. for against b. one manues, or organ topoly
- is g. fat apprais, bore marrow, or organ brooky)
 3. Evidence that amploid is light-chain-related
 autistiched by direct examination of the amyloid using mass spectrome
- jestablished by direct econivation of the anytoid using mass spectrometry-based anatosimic analysis, or immunoelectrometoxscopy)
- Evidence of a manacterial plasma cell proliferative disorder (serum or unine manactorial protein, absembal free light-chain ratio, or clonal plasma cella in the bone marrow)

Q7 & Answer

A patient with systemic amyloidosis (including GI) has these waxy-raised hemorrhagic lesions below the nose, around the lips, and eyes. What is the diagnosis?

Amyloid deposits

Explanation : Cutaneous manifestation in AL amyloidosis depends upon the site of amyloid deposition. Superficial dermal deposition of amyloid produces shiny waxy translucent papules. Flexural areas are sites of predilection, including the eyelids, retroauricular region, neck, axillae, inframammary area, umbilicus, inguinal and anogenital regions. Lesions may also be found on the central face, lips, tongue and buccal mucosa.

Q8 & Answer

All the following are the used in Mayo 2012 staging for AL Amyloidosis except ? SFLC ratio

Nov 2023

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Explanation : Two validated cardiac staging systems, Mayo 2012 (stage I-IV) and the European modification of the standard Mayo 2004 staging system (stage I-IIIb), stratify patients according to different thresholds of biomarkers of disease involvement. The Mayo 2012 model divides patients based on three biomarkers: high-sensitivity troponin T <40 ng/L, NT-proBNP <1,800 pg/mL, and difference between involved and uninvolved serum free light chain (dFLC) <180 mg/L. The European modification of Mayo 2004 stratifies patients based on two biomarkers: high-sensitivity troponin T <50 ng/L and NT-proBNP <332 ng/L with stage III sub-classified into two sub-stages using NT-proBNP at 8,500 ng/L cutoff.

Q9 & Answer

Clinical trials may be stopped for futility if there is little or no chance of demonstrating the hoped-for effect. Reasons include all except :

Lack of funding/ finances for continuing the trial

Explanation : No unfoitrm time point for PET in this prospective study. The median time from transplant to screening with PET was 146 days (IQR : 103-186d)

• Q10 & Answer

VITAL trial showed benefit of Birtamimab in post-hoc analysis in which patients ?

Benefit in time to ACM in stage IV AL amyloidosis

Explanation : Gertz MA, Cohen AD, et al. Birtamimab plus standard of care in light-chain amyloidosis: the phase 3 randomized placebo-controlled VITAL trial. Blood. 2023 Oct 5;142(14):1208-1218. doi: 10.1182/blood.2022019406





Jan 2024

ANSWER MYELOMA QUIZ : OCT 2023 - MAR 2024

• Q11 & Answer 🔸

The term "amyloid" was brought into the scientific literature by :

German botanist Matthias Schleiden

Explanation : The term "amyloid" was brought in the scientific literature by the German botanist Matthias Schleiden. Schleiden oriented to botany, microscopy and anatomy, with a special interest in the chemical and anatomical composition of plant cell, and received his second PhD in 1839. One of Schleiden's major ideas was to apply the iodine-sulphuric acid test for starch in plants. Schleiden describes "amyloid" to represent "a normal amylaceous constituent in plants

- Q12 & Answer 🔸

Identify the incorrect statement wrt to the protocol of the study by Buske et al evaluating B+ DRC in WM :

Rituximab 375mg/m2 IV was used in both arms for all 6 cycles

Explanation : ROnly during first cycle was Rituximab 375mg/m2 IV used but for subsequent cycles SC Rituximab 1200mg was used.

• Q13 & Answer •

Which of these statements is incorrect wrt to findings of study by Buske et al evaluating B+ DRC in WM ?

≥ Grade 3 adverse events occurred more commonly in the B-DRC arm and neuropathy was the most common reason for drug discontinuation

Explanation : ≥ Grade 3 adverse events were equivalent in both experimental arm and control arm; Ref : Buske C, Dimopoulos MA,et al; Bortezomib-Dexamethasone, Rituximab, and Cyclophosphamide as First-Line Treatment for Waldenström's Macroglobulinemia: A Prospectively Randomized Trial of the European Consortium for Waldenström's Macroglobulinemia. J Clin Oncol. 2023 May 10;41(14):2607-2616. doi: 10.1200/JCO.22.01805

Q14 & Answer

Which of these statements is incorrect wrt to WM?

Paratrabecular infiltration by lymphoplasmacytic cells is the hallmark of WM in bone marrow biopsy specimens.

Explanation : The common patterns of BM infiltration mentioned in the literature are diffuse, nodular interstitial, mixed paratrabecular nodular, and paratrabecular patterns. Interstitial infiltration by lymphoplasmacytic cells is the hallmark of WM and paratrabecular pattern is rare

Q15 & Answer

Which of the following statement regarding response rates to Talquetamab in specific myeloma subgroups is incorrect wrt to findings of the MonumenTAL trial ?

The most common cytogenetic abnormality seen in WM is 6q deletion and is associated with reduced PFS.

Explanation : 22–46% of WM patients have a 6q deletion. WM patients with 6q deletion have higher levels of β 2M, lower albumin, and anemia. Nonetheless; the association between 6q deletion and disease progression or prognosis is controversial





Feb 2024

ANSWER MYELOMA QUIZ : OCT 2023 - MAR 2024

Q16 & Answer 🔸

Which of the following is an incorrect statement regarding the Swedish physician Jan Waldenstrom?

He initially desribed cases of WM as "Purpura hyperglobulinemica"

Explanation : Although he coined the term "purpura hyperglobulinaemica," this entity is now recognized as benign hypergammaglobulinemic purpura of Waldenström (BHPW). Subsequent studies have shown that rheumatoid factor was present in all and intermediate complexes ranging from 7 S to 19 S were found on ultracentrifugation. The purpura can be precipitated by increases in hydrostatic pressure. Moreover, we now know that BHPW occurs frequently in autoimmune diseases and rarely with multiple myeloma.

• Q17 & Answer 🔸

Identify the incorrect statement wrt to the protocol of the study by Castillo et al evaluating Ibrutinb + Ven in WM :

> G CSF support was permitted only when absolute neutrophil count < 500µl

Explanation : G CSF support was permitted only when absolute neutrophil count < 1000 μ l

• Q18 & Answer •

Which of these statements is incorrect wrt to the trial results by Castillo et al evaluating Ibrutinb + Ven in WM ?

3 cases of clinical TLS were seen in the trial and none required RRT

Explanation : No single case of clinical TLS in the trial

• Q19 & Answer 🔶

MYD88 mutation L265P is not a common association with which of these disorders

IgM Myeloma

Explanation : Upto 10 percent of SMZL and MALT oma and 80 percent of IgM amyloidosis have MYD88 mutation L265P but IgM myeloma lack the same.

Q20 & Answer •

Which of these statements is incorrect wrt International Prognostic Scoring System for Waldenström Macroglobulinemia?

LDH and IgM levels > 5000mg/dl are predictors of early mortality in WM as per IPSS

Explanation : IPSS WM	Risk group	Stage 1 (kw risk)	Stage 2 (intermediate risk)	Stage3 (high risk)	
	RUA factors presents* O or 1 Age or 2 (escept age)	Age or 2	5_3		
	5-year OS (N)	ΕŪ.	68	36	
	*Bia. factors for IPSDWM include: age ≥65 years, Ho ≤11.5 gHB, plankers ≤ 100 × 10 ⁵ N, 80M > 3mg/L and IgM > 70 gH. Other mix factors not included in IPSDWM include elevated serum LDH and low enum albumin RDM, (Jo microglobulin; Hb, haemoglobur; IgM, internatoglobulin; Hb, haemoglobulin; IgM, internatoglobulin; Hb, haemoglobulin; IgM, internatoglobulin; Hb, haemoglobulin; IgM, internatoglobulin; I				



Mar 2024

ANSWER MYELOMA QUIZ : OCT 2023 - MAR 2024

• Q21 & Answer 🔸

Which of the following was not an exclusion criteria in the trial which used the study protocol shown?

Supine systolic blood pressure < 100 mmHg

Explanation : Supine systolic blood pressure < 90 mmHg was used as exclusion trial

• Q22 & Answer 🔶

Identify the diagnostic modality being shown in the image which is a good value addition in assessing organ dysfunction in amyloidosis.

Four-chamber strain imaging using speckle-tracking echocardiography



Q23 & Answer

Which of these statements is incorrect wrt to the OS results by Sara et al evaluating role of Daratumumab in Mayo stage IIIB AL amyloidosis?

In regression analysis, dFLC ≥500 mg/L or NTproBNP ≥16,000 pg/mL predicted OS in the Mayo IIIb cohort

Explanation : Ref Oubari S,et al; A. Daratumumab in first-line treatment of patients with light chain amyloidosis and Mayo stage IIIb improves treatment response and overall survival. Haematologica. 2024 Jan 1;109(1):220-230. doi: 10.3324/haematol.2023.283325

• Q24 & Answer •

Which of these statements is incorrect wrt to the response rates results by Sara et al evaluating role of Daratumumab in Mayo stage IIIB AL amyloidosis ?

The benefit of adding daratumumab to first-line therapy appeared to increase relatively with increasing NT pro BNP across all levels

Explanation : The benefit of adding daratumumab to first-line therapy appeared to increase relatively with increasing NT pro BNP up to 25,000 pg/ml.. However, this advantage appeared to decrease with further increases in NT pro BNP.

• Q25 & Answer •—

Subgroup analysis of overall survival in patients with AL amyloidosis and Mayo stage IIIb favoured Daratumumab in all subsets except ?

Proteinuria > 5g/24h

Explanation : Advanced kidney disease, i.e., renal stages II and III and especially proteinuria >5 g/24 h, reduced the benefit of adding daratumumab, confirming data from Kimmich et al. who showed that the antibody is excreted in the urine in the context of proteinuria and thus loses efficacy.



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Indian abstracts in plasma cell dyscrasias at ASH 2023

- Jeevan Kumar, Rajat Pincha, Vivek S Radhakrishnan, et al. Safety and Efficacy of Bortezomib-Pomalidomide-Dexamethasone (VPD) As Novel Induction Therapy in Newly-Diagnosed Multiple Myeloma: Updated Data from an Ongoing Single Arm Phase-II Investigator- Initiated Clinical Trial (PRIME Study). Blood 2023; 142 (Supplement 1): 6713. doi: https://doi.org/10.1182/blood-2023-186903
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"Autologous HSCT – Data from Eastern India – The data strengthens"

Kathrotiya M, Radhakrishnan V, Bhave SJ, et al. Bortezomib-based induction therapy followed by autologous hematopoietic cell transplantation in newly diagnosed multiple myeloma patients: A single-center experience and review of Indian literature. Indian J Cancer. 2023;60(4):486-492. doi:10.4103/ijc.ijc_78_22

This is a retrospective study of Newly Diagnosed Multiple Myeloma patients who underwent Autologous stem-cell transplant (ASCT) at Tata Medical Centre, Kolkata from 2011 to 2018. A total of 1169 patients with newly diagnosed myeloma were registered in the above time period. Ten percent (n=78) of the transplant eligible patients (n=764) from their centre underwent ASCT. Median age was 59 years (range: 22–66 years); 51 (65%) were males, and 55% patients had an ISS-stage III disease. Most common isotype was IgG kappa, found in 34 (44%) patients. Light chain MM was found in 19 (23.5%) patients. FISH test reports were available in 37 (47%) patients. Of these, 30 were standard risk, and 7 were high-risk. The most common induction regimen given was VTD in 62 (79%) patients, followed by VCD in 13 (17%) patients. The median number of cycles received before AHCT was 6 (range: 5–7 cycles). Median cost of ASCT was INR 4.5 lacs (US\$ 5800). Pre-transplant, 90% patients were in ≥VGPR (It should be borne in mind that bone marrow examination was not done routinely to assess response in all patients). Median follow-up of their entire cohort was 57.2 months. The entire cohort's 5 year overall survival (OS) and progression free survival (PFS) were 89.1% and 41.8%, respectively.

"Original research publications from India" Publications from Indian Faculty

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"Pre-transplant PET-CT – To do or Not to do?"

Yanamandra U, Reddy Gorla AK, Agrawal K, et al. Prognostic significance of extramedullary disease (EMD) detected on pre-transplant 18F-FDG PET/CT in patients with multiple myeloma: Results of PIPET-M trial. Med J Armed Forces India. 2023;79(6):672-678. doi:10.1016/j.mjafi.2023.08.007

This is a single centre prospective study from Northern India during a study period of 2014-2022. Median follow-up of their cohort was 6 years. All patients planned for autologous stem-cell transplant (ASCT) underwent 18F-FDG-PET/CT as part of pre-transplant workup. The conditioning and treatment protocols were not modified based on PET/CT findings. Extramedullary disease (EMD) on PET/CT was correlated with pre-transplant biochemical markers and post-ASCT survival/ progression (as defined by revised IMWG criteria). Statistical analysis was done using SPSS ver. 20. Patients with pre-ASCT EMD had a hazard-ratio for post-transplant all-cause mortality of 5.46 (p-0.045). Pre-transplant β 2M and LDH were significantly higher in patients with EMD (p-0.036). The 6-year median OS in patients with and without EMD were 57.1%, and 80.6% respectively. There was no significant difference in clinical or biochemical EFS among patients with EMD. EMD detected on 18F-FDG-PET/CT has a higher hazard for mortality and is significantly correlated with pre-transplant higher β2M and LDH levels. Thus, it seems worthwhile to do a pre-transplant 18F-FDG-PET/CT for prognostication.

"Original research publications from India" Publications from Indian Faculty



"Bone marrow fibrosis and Amyloidosis in patients with plasma cell neoplasms – A Less Explored Entity"

Kannan N, Dass J, Dangudubiyyam S, et al. Clinico-pathological profile of patients with plasma cell neoplasms with special reference to bone marrow fibrosis and amyloid deposition. J Clin Exp Hematop. 2023;63(4):214-218. doi:10.3960/jslrt.23029

This was a retrospective single-centre analysis from Department of Hematology, AIIMS, Delhi. Authors sought to study the incidence of bone marrow fibrosis and amyloid deposition at diagnosis in plasma cell neoplasms at diagnosis. A total of 273 bone marrow aspirates and biopsies of patients with suspected plasma cell neoplasms were analysed. Of these, there were 181 male patients and 92 female patients (Male: Female = 1.96: 1). Amongst 273 diagnostic samples, there were 245 cases of multiple myeloma (89.7%), 8 cases of primary amyloidosis (2.9%), 6 cases of monoclonal gammopathy of undetermined significance (MGUS) (2.1%), 5 cases of plasmacytoma (1.8%), 4 cases of smouldering myeloma (1.4%), and 5 cases of POEMS syndrome (1.8%). Interestingly, bone marrow fibrosis was noted in 12 patients at diagnosis (4.3%). Importantly, all 12 of them were diagnosed as multiple myeloma with an incidence of fibrosis in this cohort being 4.9% (12/245). Patients with bone marrow fibrosis had significantly lower hemoglobin at presentation as compared to those without (6.25 vs 9.6 gm/dl; p=0.001). Concomitant amyloid deposition in any organ (bone marrow, liver, kidney) was noted in 6.2% patients (n=17) at diagnosis. Of these 17 patients, 9 had concomitant myeloma, and 8 had primary amyloidosis. This study highlights the incidence of bone marrow fibrosis in approximately 5% patients of myeloma at diagnosis, and the presence of amyloidosis in 6% patients who have a suspected plasma cell neoplasm.

"Original research publications from India" Publications from Indian Faculty



"Cytogenetics Alterations in Patients with Multiple Myeloma in Eastern India"

Jha K, Saha S, Bhattacharyya M, et al. Cytogenetic Alterations and Correlation with Age and Gender in Patients of Multiple Myeloma: A Study from a Tertiary Care Center in Eastern India. South Asian J Cancer. 2024;13(2):126–131.

Multiple myeloma is a cytogenetically heterogeneous, evolving, and incurable disease. Differences in prevalence of myeloma already exist in Indian subcontinent as compared with Western world countries. This study attempts to investigate differences in incidence of cytogenetic abnormalities (CA) in Eastern Indian patients and study differences in incidence with respect to age and gender. iFISH was applied on purified plasma cells in patients of newly diagnosed multiple myeloma (NDMM). Probes used for all patients included del13g, del17p, t(4;14), t(14;16). A separate set of 100 NDMM patients were studied for 1q gain by iFISH. The cutoff threshold used was 5% for all the probes. 51.07% patients had iFISH positivity. Del13q was the most common CA. Del13q was commonly associated with t(4;14), del17p, and 1q gain. Higher number of cases were positive by FISH in 41-50 years age group (p<0.05). Those in 61-70 years age group had lower FISH positivity (p<0.05). Del17p had higher number of cases in age group 41 to 50 years and 51 to 60 years as compared with other age groups. Incidence of t(11;14) was in 5th to 7th decade, while del13g and t(4;14) had the widest range of age at presentation. Gender disparities with female predominance were seen in high-risk CAs like del17p and 1q gain. Important drawbacks of this study include - not specified whether iFISH was done in-house or outsourced, absence of corelation with treatment outcomes and survival, and absence of detection CAs like t(14;20) and del1p in their cohort. Nonetheless, it illustrates the heterogeneity in CAs in NDMM in Eastern India patients.

"Original research publications from India" Publications from Indian Faculty



PATIENT AWARENESS PROGRAM







Glimpse of Event



Link for the event video: https://imagesociety.co.in

Partnership with ASGI



A Book on various aspects of Amyloidosis was edited by Mr Satish Chandra, ASGI Chairperson which was released by the IMAGe



Updates in the Treatment of **Waldenstrom Macroglobulinemia.**

Valdenstrom Aacroglobulinen Indian Myeloma Academic Groupe (IMAGe)







Updates in the Treatment of Waldenstrom Macroglobulinemia

29th March 2024 Venue: Council Hall, Dr. S N Medical College, Jodhpur

30th March 2024 Venue: M D M Hospital, Dr. S N Medical College, Jodhpur

Program Coordinator

Dr. R C Purohit Senior Pathologist Jodhpur

Contact Person

Dr. Arvind Mathur Ex-Principal, Dr S N Medical College, Jodhpur Mob: +919829024569 Email: arvindmathur@caregiversashasociety.com

Click here to register https://forms.gle/fBD2mBDF4QWaL7Fy8



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Glimpse of Event

Updates in the Treatment of "**Waldenstrom Macroglobulinemia**" held at Dr. S N Medical College, Jodhpur as on **29th & 30th March 2024.**







Glimpse of Event



"Amyloidosis and the Waldenstrom chapter"

Mag

INDIAN MYELOMA CONGRESS 2024





The 6th annual Conference of Indian Myeloma Academic Groupe **"IMC 2024"** held at Symbiosis Medical College for Women, Pune from **12th to 14th January 2024.**



INDIAN MYELOMA CONGRESS 2024



Dr. Nikhil Munshi Dr. Priya Sampathkumar Dr. Dipti Talaulikar Dr. Ashutosh Wechalekar Dr. Prashant Kapoor Dr. Vincent Rajkumar

NATIONAL FACULTY

Dr. Amit Khot Dr. Chandramauli

Dr. Kannan S. Dr. Vijay Ramanan Dr. Nikhil Munshi Dr. Ashish Dixit Dr. Manoj Toshniwal Dr. Vishvdeep Khushoo Dr. Varun Bafna Dr. Amrita Ramaswami Dr. Sweta Kothari Brig. Dr. J. Muthukrishnan Dr. Bhausaheb Bagal Dr. Venkatesh Ekbote Dr. Ketan Modak Dr. Sanket Shah Dr. Seema Bhatwadekar Dr. Rayaz Ahmed Dr. Sameer Tulpule Dr. Pankai Malhotra Dr. Sameer Melinkeri Dr. Sharat Damodar Dr. Jeevan Kumar Dr. Faheema Hasan Dr. Revanth Dr. Renu Mishra Dr. Shubprakash Sanyal Dr. Sandip Bartakke Dr. Subhash Varma Dr. Prashant Kapoor Dr. Stalin Balachoudhary Dr. Ganesh Kumar Dr. Ganesh Jaishetwar

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Dr. Sarthak Wadhera Dr. Anupam Brahma Dr. Arjin Philips Dr. Saswat Saha Dr. Karthik Ambalavana Dr. Vaikhari M. G. Dr. Rajat Pincha Dr. Gurvinder Kaur Dr. Devyani Surange Dr. Mahima Choudhari Dr. Ajay Kumar Jha Dr. Joydeb Singha Dr. Deep Gala Dr. Souvik Saha Dr. Shubh Purohit Dr. Nirali Chandan Dr Chinnu Jomi Dr. Jhansi J. Dr. Abhijeet Baheti Dr. Rahul Naithani Dr. Raiendra Pol Dr. Sumeet Mirgh Dr. Saurabh Bhave Dr. Abhav Bhave Dr. Anusree Prabhakaran Brig. Ajay Sharma (Retd.) Dr. Charanpreet Singh Dr. Neelam Varma Brig. Dr. S Das (Retd.) Dr. Rithambhara Nada Brig. Ranjith Nair

INDIAN MYELOMA CONGRESS 2024

06th ANNUAL CONFERENCE OF IMAGe

12th - 14th JANUARY 2024

INTERNATIONAL FACULTY -



Dr. Amit Khot Australia



Dr. Dipti Talaulikar Australia



Dr. Ashutosh Wechalekar UK



Dr. Nikhil Munshi USA



Dr. Chandra Mouli Singapore



Dr. Prashant Kapoor USA



Dr. Priya Sampathkumar USA



Dr. Vincent Rajkumar USA



Glimpse of Event

INDIAN MYELOMA CONGRESS 2024 The 6th annual Conference of Indian Myeloma Academic Groupe **"IMC 2024"** held at Symbiosis Medical College for Women, Pune from **12th to 14th January 2024.**



HBCH Varanasi patients helped by IMAGe for Medicines



PATIENTS HELPED FOR TRANSPLANT

Thanks to Oswal Industries for the Donation



Patient: 1 File No. - KE/51733 Date of transplant - 11.08.2023 Male / 48 yrs

अववर्ता लांग लुवन मर महाम महाम के बाद के हैं मानम्बर के प्रवाद ताराणहों के प्रयत्न के साम प्रमान्धर के प्रियायन ताराणहों के प्रयत्न के लग प्रमान्धर के प्रियायन प्रयति के प्रिय के लग कि तो को लिया के प्रयाद बज्जन के तिये उठा है त्युके के प्राण्गि के बुके के त्युके के प्राण्गा के प्रयत्न के त्युके के ब्रा के के लग करता हैं.



Patient: 2 File No. - KE/51977 Date of transplant - 07.06.2023 Male / 55 yrs

Patient: 3 File No. - KD/51358 Date of transplant - 10.02.2024 Male / 32 yrs





Patient: 4 File No. - CV/39654 Date of transplant - 14.09.2023 Male / 50 yrs



DR. REENA NAIR SCHOLARSHIP

EDUCATION GRANT DURING IMC 2024 ₹2,00,000





Winner of Dr Reena Nair Scholarship for participating in **The Indian Myeloma Congress 2024.**



DR. TAPAN SAIKIA TRAVELING FELLOWSHIP

TRAVELLING FELLOWSHIP DURING IMC 2024





INDIAN MYELOMA CONGRESS 2024

06th ANNUAL CONFERENCE OF IMAGe

Winners of Dr. Japan Saikia Travelling Fellowship for participating in the Conference

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Harshini Sriram Mugdha Sathe Pratibha Suku Priyanka Moule Anupam Brahma Bhavani Mandava Sandeep Abhijit Pattnaik Soujanya M Rashmi Yawalkar Karthik Ambalavana Aakash Chozakade Deep Gala Arjin Philips Abhishek Das Disha Jain Gourav Bain Sudip Roy Soudamini Mahapatra

Reshmy Gs Mrudula E.v T Jemima Evangelyn Subhiksha Sundaram Sarthak Wadhera Deepalakshmi Putchen Somanath Padhi E. Nithye Parvathy Aravind Radhakrishnan Wesley Joyal Deepa Subramanian Vaikhari M G Sreedhar Jayakrishnan George John Saswat Saha Gayathri J Suvir Singh Samyukta Shyam

Souvik Saha Punit Jain Joydeb Singha Venkata Madhavi Koka Aekta Gupta Manasi Gupta Rajat Pincha Sushma Meenugu **Rizwan Athar** Gurvinder Kaur Mayank Soni Tharageswari Srinivasan Sharanya Sathish Mohammed A. R. Basalathullah Nidhi R Devyani Surange Rupjyoti Sarma Aimat Khan



Winner of Dr. Tapan Saikia Traveling Fellowship for participating in **The Indian Myeloma Congress 2024.**

"Annual Myeloma Quiz during IMC 2024"

AWARDS & ACCOLADES

Awards and Accolades





Hospital, Pune

Sahyadri Superspeciality Hospital, Pune



Manipal Hospital, Banglore





Awards and Accolades

"Annual Myeloma Quiz during IMC 2024"



ORAL PRESENTATION



DR. RITU GUPTA AIIMS, New Delhi



MS. PRATIBHA SUKU PGIMER, Chandigarh



DR. HARSHINI SRIRAM ACTREC, TMC, Mumbai



Awards and Accolades

"Annual Myeloma Quiz during IMC 2024"

AWARDS & ACCOLADES



MINI ORAL PRESENTATION



DR. PRIYANKA MOULE SGRH, New Delhi



DR. SARTHAK WADHERA PGIMER, Chandigarh



DR. ARJIN PHILIPS Apollo Hospital, Kolkata



DR. KARTHIK AMBALAVANA Madras Medical College, Chennai



DR. SANJEEV SGPGI, Lucknow



DR. ANUPAM BRAHMA TMC, Kolkata



DR. SASWATA SAHA TMC, Mumbai



DR. VAIKHARI M G Government Medical College, Kozhikode



Awards and Accolades

"Annual Myeloma Quiz during IMC 2024"

AWARDS & ACCOLADES





DR. RAJAT PINCHA TMC. Kolkata



DR. DEVYANI SURANGE Army Hospital, New Delhi



DR. AJAY KUMAR JHA Vayodha Hospital, Nepal



DR. GURVINDER KAUR AllMS. New Delhi



DR. MAHIMA CHOUDHARI AFMC, Pune



DR. JOYDEB SINGHA Apollo Hospital, Kolkata



DR. TAPAN SAIKIA Jaslok Hospital, Mumbai





Armed Forces Medical College, Pune

ILLUMINATI RESONATE 2024

A total of ₹15 LaMis

were sponsored for the event

ILLUMINATI RESONATE WINNER



Dr. Ayush Amlan AIIMS Bibinagar, Hyderabad



Dr. Sana Thimmoji

Jawaharlal Nehru Medical College , Belagavi , Karnataka (KLE University)



A total of 29 colleges participated in the "Resonate" held as part of Illuminati 2024, a UG medical conference organized by the Student's Scientific Society AFMC co-sponsored by IMAGe, wherein the students were asked to prepare patient educational material for patients suffering from

"Amyloidosis" to make understanding of the disease easy.

Recent Partnerships



Indian Myeloma Academic Groupe (IMAGe)



Indian Myeloma Academic Groupe	
AMYLOIDOSIS CHAPTER	6th Annual OF IMAGe
DIAN BAVELOBRA CONCEPCE 2024	

IMAGe partenered with ASGI. The Amyloidosis Support Group India is a compassionate and dedicated community formed to provide essential support, information, and resources to individuals suffering from Amyloidosis.

Recent Partnerships



Indian Myeloma Academic Groupe (IMAGe)



Macroglobulinemia Foundation





IMAGe signed an MoU with The International Waldenstrom's Macroglobulinemia Foundation (IWMF). IWMF is a patient-funded and patient-driven, nonprofit organization that is dedicated to patients suffering from Waldenstrom macroglobulinemia.



Recent Partnerships



Indian Myeloma Academic Groupe (IMAGe)



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IMAGe signed an MoU with the Caregivers Asha Society. This society aims to support caregivers at local and state levels through evidence-based research, educational programs, and practical assistance.



The Geeks - Editorial Team



Dr. Uday Yanamandra



Dr. Gurleen Oberoi



Dr. Sumeet Mirgh



Dr. Arun V A

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