MYELOMA HIGHLIGHTS FROM ASH CONFERENCE ORLANDO 12/4-8/2015

According to Jack Aiello (definitely not medically trained)

PREFACE

This is my 10th year attending ASH (American Society of Hematology), where 25,000 attendees from all over the world (hematologists/oncologists, lab researchers, oncology nurses, scientists & 300 pharma companies) present the latest research results via both oral presentations (1000) as well as posters (3000) on all blood cancers. This year there were nearly 800 abstracts (>100 clinical) on Myeloma alone, many of which were selected for oral presentation. I'm grateful to the IMF (www.myeloma.org) and their pharma donors for sending me to ASH so that I can learn and share my patient perspective with you.

Rather than attending talks on Biology, I typically focus on the Clinical Trials, which I'm able to understand and are more relevant near-term to patients. Even at that, there are overlapping MM oral sessions as well as 4'x6' posters without reprints, so it's always possible that I have not included something of interest to you or made a typo because I can't read my own writing as detailed powerpoint slides are presented quickly. You might want to view the published abstracts at www.hematology.org and various press releases. [Wherever possible, I've listed Day-Abstract#-Lead Investigator after the trial results, e.g. {Sat-25-B. Durie} and clicking on the abstract number will take you to the actual abstract.]

There are other ways to learn more about results from this conference. There are scheduled webinars (IMF 1/7/15, MMRF 1/13/15) which you can listen to live or by replay. You'll also find some patient blogs (including mine) as well as MM expert video interviews posted on the IMF website (www.myeloma.org) and Patient Power (www.patientpower.info) among others. And all of us in the SF Bay Area should attend the LLS Blood Cancer Conference (which includes updates from ASH) Jan 23, 2016 (Register Now). Dr. Jeff Wolf of UCSF will do a great job presenting the latest information.

Presentations and posters of clinical trial results follow the same format: Background (including hypothesis), Study Objective, Design & Treatment schema, Patient Characteristics & Cohorts, Responses (include high-risk cytogenetics), Toxicity (hematological and non-hematological), Conclusion, and Next Step. Remember, the goal of Phase I (typically handful of patients) is to determine "Maximum Tolerated Dose"; Phase I/II and II (typically 25-75 pts) continues to measure dosage escalation and safety while looking at responses; and finally Phase III (several hundred patients) compares response rates between new and current treatments.

Treatment schedules are defined for stages of **Induction**, and optionally **Transplant**, **Consolidation**, and **Maintenance** with specified **Randomization** along the way; dosage amounts and scheduling are provided for each drug along with optimum number of treatment cycles (typically 28 days). **Risk stratification** correlates various techniques such cytogentics-FISH analysis (e.g. chromosome deletions and translocations) and gene-expression profiling (GEP).

HIGHLIGHTS (e.g. My Takeaways)

1. The Ultra High Risk (plasma% > 60%, FLC ratio > 100, >1 focal lesions) **Smoldering multiple myeloma patients (SMM)** have already been re-classified as MM pts, even without CRAB criteria. Other SMM pts that have some indication of high-risk features (e.g. perhaps plasma% > 10% and one of FLC ratio > 8 or cytogenetics such as del17p) should investigate participation in a clinical trial such as E3A06 to determine the efficacy of early treatment.

2. **Three-drug VRd therapy** for newly diagnosed patients has been shown to have longer progression free survival (PFS) and overall survival (OS) than two drugs and should be considered the standard of care. Mayo's M-SMART (www.msmart.org) treatment protocol recommendation for newly diagnosed standard and intermediate risk patients has been updated from Rd to VRd (still KRd for high-risk).

3. For relapsed patients, treatment isn't as clear cut but with the **recent approvals** of Darzalex (Daratumumab), Ninlaro (Ixazomib), and Empliciti (Elotuzumab), patients have more options as they combine each of these with the baseline Rev-dex. How clinicians will use or "sequence" Dara-Rd, Ixa-Rd, and Elo-Rd will likely be better understood over the next one to two years, making it even more beneficial for patients to have a Myeloma expert as part of their treatment team.

4. **Minimum Residual Disease (MRD)** testing is not ready for prime time, but it has good prognostic value for MM patients, similar to CR being a good prognostic indicator. MRD still needs to be consistently defined using NGS or Flow (8-color/2 tubes). Trade-offs include NGS needs diagnostic sample and has higher cost while Flow needs "fresh" samples. And more trials need to integrate MRD so that clinicians can eventually use MRD results to help guide future treatment plans. And probably, MRD needs to be combined with PET-CT to get the complete picture.

5. In the large French/US study comparing **early versus late SCT**, the French showed a PFS benefit but not three-yr OS benefit (both arms about 83%), maybe because trial results are not mature. However, the French part of the study only uses one year of maintenance, whereas the US uses maintenance until progression. The US has yet to report data so will maintenance make a difference to the outcome? We'll see.

6. You'll see reports below that look at survival outcomes such as **Progression Free Survival (PFS) and Overall Survival (OS)**. However, with new treatments available, OS (i.e. death) become less meaningful for a particular drug. Perhaps the assessment of targeted biomarkers will become better measurements of drug efficacy.

COMMENTS AND DISCUSSIONS I FOUND PROVOCATIVE

7. Re Early Treatment: "In most cancers (lung, breast), early diagnosis and treatment is a prerequisite to OS improvement. When we wait, clones have a chance to develop more aggressive subclones. But we must work to develop predictive biomarkers." J. San-Miguel (Spain). However, "Should you over-treat 30% of HRSMM pts at the risk of under-treating 70%? What about toxicity? You need more evidence-based medicine." P. Moreau (France)

8. Re Using Emerging Therapies up front: "Adding later does not add up." S. Kumar (Mayo)

9. Flow (NGF) & NGS measure myeloma inside the bone marrow while PET-CT measures myeloma outside the bone marrow. A. Orfao (Spain)

10. We are still trying to determine the role of maintenance. There have been or are currently 242 clinical trials involving maintenance (including "consolidation and "continuous therapy"). Even vaccines (e.g. dendritic cells) are being tested as maintenance. T. Facon (France)

11. I attended an FDA presentation where each FDA MD reviewed their criteria for approving Ixazomib, Daratumumab, and Elotuzumab respectively, citing the specific trial as well as primary and secondary endpoint results. Then Drs. S. V. Rajkumar (Mayo) and P. Richardson (Dana Farber) discussed using these new drugs as front-line and relapsed therapies respectively. Dr. Rajkumar began "Myeloma treatment is moving so fast, the Education Session I gave 2 days ago is already out of date." To use these drugs front-line, they would be need to be "off-label" and it's better to use them within a clinical trial for newly diagnosed pts. Dr. Richardson explained the Rd is the "backbone" and we can add V, K, I, D, and E (and SAR in the future?). We'll understand more about sequencing these combinations in the next 1-2 yrs.

SMOLDERING MM

12. "If it's smoldering, is there a fire?" S. Lonial (Emory) and "Some pts with SMM really have MGUS and others MM...we just don't know which ones." S. V. Rajkumar (Mayo)

FRONTLINE THERAPY FOR TRANSPLANT ELIGIBLE PATIENTS

13. Ph 3, n=525 NDMM pts, **VRd vs Rd**. Overall Response Rate ORR (82% versus 72%), CR (16% versus 8%) Progression Free Survival PFS (43 versus 30 mos) and Median Overall Survival OS (75 versus 64 mos) all showed the benefits of triplet therapy over doublet. {Sat-**25**-B. Durie}

14. Ph 1/2, n=48 NDMM pts, including 30% HR, **Panobinostat (10mg) + RVd**. ORR after 4 cycles was 94% (CR/nCR 46%...compared with past trials RVd-only CR is 10-20%) and 14 of 26 pts were MRD- before their SCT. ASE Grade 3 nausea 6% and PN 4%. {Sun-**187**-J. Shah}

15. Ph 3, n>2000 NDMM pts comparing **KCRd with CRd (and CTd)**. It showed the 4-drug regimen that added Carfilzomib resulted in higher >= VGPR (82% vs 62% vs 55%) and that KCRd had lower (!) hematological suppression than CRd (9% vs 16%). {Sun-**189**-C Pawlyn, UK}

FRONTLINE THERAPY FOR TRANSPLANT INELIGIBLE PATIENTS

16. Ph 2, n=70 NDMM pts, **Ixazomib-Cytoxin-Dex** (ICd) randomized to C = 300 or 400 mg all oral therapy. Plus Ixa maintenance. Early ORR results better in C=300 arm (78% vs 75%) and >=VGPR (28% vs 21%). PFS @ 9 mos was 90% but data not yet mature. {Sat-**26**-M. Dimopoulus}

17. {FIRST subgroup analysis} n=142 **High Risk** [del 17p, t(4;14) or t14;16)] NDMM pts randomized to 3 arms: **Rd till progression vs Rd 18 cycles vs MPT 12 cycles**. In non HR pts, median PFS was 31 mos vs 21 mos vs 25 mos while HR pts were 8/18/15 mos. In non HR, 3yr OS % was 77% vs 71% vs 65% while HR pts were 41/40/47%. So while Rd till progression was the winner overall in the FIRST trial, it did not do so well comparably in High-Risk pts. {Mon-**730**-H. Avet-Loiseau}

18. Ph 2, n=40 NDMM pts, "**RVd-lite**" study Rev = 15mg, days 1-21; Vel = 1.3 mg/m2 once/week; dex = 40 mg/wk for pts <75yo and 20 mg /wk otherwise. After 4 cycles, ORR was 90% (including CR 25%), 2 yr PFS is 68%. {Mon poster-**4217**-E. O'Donnell}

TRANSPLANTS

19. Ph 3, n=700 70 NDMM pts, "**Determination**" RVd +/- SCT + RVd consolidation + R maintenance. The French side of this study showed benefits in the SCT arm for ORR (88% vs 78%), CR (59% vs 49%), 4-yr PFS (47% vs 35%), and MRD- (80% vs 65%) but no OS difference (83%), which could be due to the short timeframe as well as early crossover to the SCT arm. {Sun-**391**-M. Attal}

20. Ph 3, n=389 NDMM pts, **SCT vs Cytoxin-Rd followed by RP vs P maintenance**. SCT showed improvement in median PFS (43 vs 29 mos) and 4-yr OS (86% vs 73%) Median PFS from the start of maintenance was 38 mos for RP vs 29 mos for R-only but 3-yr OS was similar (83% vs 88%). Of note, at the start of maintenance, MRD- was 48% for the SCT arm vs 28% for CRd, even though CR and VGPR numbers were very close. {Sun-**392**-F. Gay, Italy}

21. Ph 3, n=174 (of 297 enrolled) prior SCT pts. **Salvage SCT** was defined as a 2nd SCT after relapse > 18 mos from prior SCT. All pts were re-induced with Velcade-Doxorubicin-Dex (PAD) and randomized to either 2nd SCT vs 12 wks Cytoxin with crossover. ORR to re-induction was 79%. 4yr OS was 69% (2nd SCT) vs 61% (crossed over to 2nd SCT) vs 50% (no 2nd SCT), so beneficial to have salvage SCT sooner. {Sun-**394**-G. Cook, UK}

TREATMENTS FOR RELAPSED/REFRACTORY (R/R) PATIENTS

22. Combination of two Ph 2 trials, n=148 pts, double-refractory to a PI & IMID. **Daratumumab alone (!)**. Dosage 16mg/kg. ORR= 31%; median PFS was 7.4 mos; 1 yr OS 69%. For pts who responded, the OS results were even better: OS for MR/SD pts = 17.5 mos, and not reached for >=PR. 10-18% of pts experienced some hematological ASE's. {Sat-**29**-S. Usmani}

23. Ph 2, n=32 RRMM pts. **Daratumumab (16mg/kg) + Rd**. ORR 81% (compared with Rd ORR 61-66% for similar pts); 63% >= VGPR. PFS @ 12 mos 91% (compared with Rd median PFS 11-15 mos for similar pts) and PFS@18 mos 72%. OS@18 mos 90%. ASE's similar to Rd-alone other than some infusion reaction, usually only with the first infusion. {Mon-**507**-T. Plesner, Denmark} Note: Dr. Torben Plesner was the first doctor to treat an MM pt with Dara in 2007.

24. Ph 1b, n=98 RRMM pts with at least 2 lines of prior therapy. **Dara + Pom-d**. 67% of pts refractory for both IMI and PI but Pom-naïve. ORR 71% (nearly same for double-refractory) including 9% CR. PFS @ 6 mos is 66%. ASE's similar to Pom-d alone other than half of pts had IRR (Infusion Rate Reaction) during the first infusion but only 3% at 2nd infusion. {Mon-**508**-A. Chari}

25. Ph 2, n=152 RRMM pts, 50% prior Velcade treatment, 1-3 prior therapies. **Elotuzumab (10 mg/kg) +/- Vd**. Benefits in >= VGPR (36% vs 27%), median PFS (10 mos vs 7 mos) while ORR about the same (65% vs 63%). Grade 3/4 AE higher in EVd (71%) than Vd (60%), most of this difference being infections (23% vs 15%). {Mon-**510**-A. Palumbo}

26. {Eloquent-2} Ph 3, n=646 RRMM pts, **Elotuzumab +/- Rd**. Elo-Rd showed PFS benefit 4.5 mos (19.4 vs 14.9) with very similar Adverse Events except infusion reaction in 10% pts (of which 63% were in the first infusion). {Sat-**28**-P. Richardson}

27. {Endeavor subgroup analysis}Ph 3, n=210 RRMM **high-risk** pts, **Kd vs Vd**. PFS benefit ~3 mos (8.8 vs 6 mos); ORR 72% vs 58% (CR 16% vs 4%). 1-2% (3% vs 1%) experience more cardiac issues in the Kd arm. {Sat-**30**-S. Usmani}

28. {Endeavor subgroup analysis}Ph 3, n=465 RRMM , **Kd vs Vd** outcomes for **1 and 2+ prior lines** of therapy. Median PFS: 1 line 22 vs 10 mos; 2+ lines 15 vs 8 mos. ORR: 1 line 82% vs 66%; 2+ lines 72% vs 60%. This presentation concluded that Kd should be considered in pts who have progressed on Rev maintenance. {Mon-**729**-P. Moreau}

29. {Tourmaline-MM1} Ph 3, n=722 RRMM pts, **Ixazomib (4mg days 1, 6, 15) +/- Rd** (IRd vs Rd). Note that 70% pts previously had Velcade but were not refractory to Rev or PI. Benefits seen in ORR (78% vs 72%, including CR 12% vs 7% and VGPR 36% vs 32%) and Median PFS (20.6 vs 14.7 mos, including del17 21 mos vs 10 mos). OS data not presented due to lack of maturity. {Mon-**727**-P. Moreau}

30. {ASPIRE subgroup Analysis} Ph 3, n=100 HR RRMM pts. **KRd vs Rd**, where **High Risk** is one of del 17p (>60% of plasma cells), t(4;14) or t(14;16). Median PFS for HR was 23 mos vs 14 mos (compared with std risk 30 mos vs 20 mos). ORR from HR was 79% vs 60% (compared with std risk 91% vs 74%). {Mon-**731**-H. Avet-Loiseau}

31. A pooled analysis of 3 trials example the usage of **Pom-dex** in 355 pts with moderate **kidney involvement** (versus 713 pts with no renal impairment. Similar ORR (30% vs 34%), median PFS (4 mos vs 5 mos) and median OS (11 mos vs 14 mos) as well as Grade 3/4 AEs. {Sun poster-**3031**-D. Siegel}

MAINTENANCE (including CONSOLIDATION)

32. Ph 3, n=1964 pooled analysis examined **CR patients who received maintenance or not**, and determined a significant 5-yr OS benefit (80% vs 54%) and 5-yr PFS benefit (52% vs 19%) for pts on maintenance. {Sat poster-**1974**-C. Cerrato}

NEW DRUGS

33. {Keynote-023} Ph 1, n=17 R/R pts, including 50% refractory to Rev. **Pembrolizumab** (anti PD-l Antibody) + Rd. Pembro dose confirmed at 200mg. ORR 76% (including 56% for pts Rev-refractory), with 4 of 17 pts VGPR (24%). {Mon-**505**-J.San Miguel}

34. Ph 2, n=27 RRMM pts, 36% HR, 90% Rev-refractory, 70% refractory to both IMID and PI. **Pembrolizumab** (anti PD-l Antibody) + Pom-d. ORR 60% (including 55% for double-refractory and 50% HR). Gr3 AEs 10-20% pneumonia/infection. {Mon-**506**-A. Badros}

35. Ph 2, n=68 RRMM pts. Carfilzomib +/- **Filanesib** (ARRY-520), a kinesin spindle protein (KSP) inhibitor. Adding FIL show some benefit: ORR 28% vs 24% and median PFS 9 mos vs 4 mos. {Mon-**728**-J. Zonder}

36. **Selinexor** (KPT-330), which enhances the natural cell defenses against cancer, was combined with PI's Velcade or Carfilzomib and shown to potentially overcome drug resistance {Sunday poster-**3048**-D. Sullivan}. And when combined with Cfz-dex in a Ph 1 trial for RRMM pts including those refractory to Cfz, >= PR was 75%, although results are still early. {Mon poster-**4223**-A. Jakubowiak}

37. Ph 2, n=100 pts, 25 per arm. **Isatuximimab** (SAR650984) single agent at different dose/frequencies: Arm 1: 3mg/kg every other week (q2w); Arm 2: 10mg/kg q2w for 4 doses, then q4w; Arm 3: 10mg/kg q2w; Arm 4: 20mg/kg qw x 4 dose then q2w. ORR: 9%, 20%, 29%, 24%. Gr 3 anemia in 20% of pts. {Mon-**509**-T. Martin}

OTHER RESULTS

38. **CAR-T therapy** for myeloma treatment resulted in several oral presentations. In pre-clinical models, SLAMF7-CAR-T cell therapy was shown to be safe and effective in MM treatment. {Sat-**115**-S. Danhof}. And a company called Cellectis in France showed that they can use healthy donor T-cells and engineer them for a double KO (both TRAC and SLAMF7) to enhance antitumor activity. {Sat-**116**-R. Galetto}. And a "Late-Breaking Abstract" highlighted a Ph 1 study of 12 RRMM pts using CAR-T cells engineered as anti-BCMA CARs (CAR-BCMA). The B-cell maturation antigen (BCMA) is expressed by normal and malignant plasma cells in 60-70% of MM pts. To participate in this NCI trial, pts must have had 3 lines of prior therapy and BCMA expression. Pts were given 3 days of Cytoxin and fludarabine beforehand, but no transplant. All 12 pts achieved at least stable disease (SD) with 1 sCR, 1 VGPR, and 2PR's, typically better results as dosages increased. Pts incurred substantial toxicity (fever, kidney, cytokine release, and more but these AE's were all reversible. Still, a follow-up trial eligibility criteria will include pts have less that 50% plasma cells. {Tue-**LBA-1**-J. Kochenderfer}

39. **MRD** was evaluated in the French side of the IFM/DCFI 2009 "Determination" trial. Of n=700 pts, 178 pts were evaluated by NGS after maintenance. For CR pts, 83% were MRD- but 17% were MRD+. {Sat-**191**-H. Avet-Loiseau}

40. **MRI & PET-CT** were evaluated in the French side of the IFM/DCFI 2009 "Determination" trial. At diagnosis for n=134 pts, MRI and PET-CT were positive for 95% and 91% of pts. After 3 cycles of RVd, MRI was still positive in 93% but PET-CT in only 55% and was a better prognostic indicator for PFS but not OS. Before maintenance, MRI was not a good prognostic indicator for PFS or OS but PET-CT results were associated with significant improvement in both PFS and OS. As such, an MRI may not be needed for follow-up, while PET-CT should be part of follow-up. {Sun-**395**-H. P. Moreau}

41. This study examined n=693 SCT pts who had various induction therapies RVd, Rd, Vd, and CVd, specifically at pre-SCT and post-SCT >= VGPR results. Pre-SCT responses were 57%/42%/51%/45% and post-SCT were 65%/63%/65%/58%, all quite close. However, maintenance treatment improved 3-yr PFS to 55% vs 39% for no maintenance. In conclusion, when having an SCT, the choice of **induction treatment is less important than maintenance** therapy. {Sun-**396**-R. Cornell}

42. I attended a session on **Patient-Reported Outcomes** (PRO's) which examine Physical, Mental and Social Health in clinical trials and patient care. PRO data is used by Prescribers, Regulators, and Healthcare Payers. You can learn more about this at www.healthmeasures.net and www.nihpromis.org.

43. A Medicare cost study was done for 3000 MM pts that assessed the **economic burden** for both MM treatment costs and pharmacy antiMM cost PPPM (cost per-patient per-month) for treatment lines First ($14K, $3K). Second ($16K, $3K), and Third ($16K, $3K) in 2015 dollars. Average treatment duration was 8, 6, and 5 mos respectively. {Sat poster-**2100**-C. Chen}

44. I attended a meeting conducted by Takeda on the usage of their new oral PI **Ixazomib** (Ninlaro). It's indicated for pts who have had 1 prior treatment and used with Rev-d. It needs to be taken on an empty stomach (1 hr before or 2 hrs after a meal) in order to ensure efficacy. And while the standard dosage is a 4mg capsule, it also comes in 3 mg and 2.3 mg capsules. The name Ninlaro? While in development, the drug was called MLN9708. So Ninlaro comes from Nine (minus the "e") plus "oral" spelled backwards.

45. A study examined **Cytogenetic (CG) Progression** for 130 pts over the course of their disease, taking bone marrow samples and looking for risk factors such as del 17p, t(14;16), t(14;20), t(4;14), del 13 and gain 1q21. 90 (69%) of 130 pts had normal CG at diagnosis but 27% of these pts developed abnormal CG during disease course, resulting in shorter median OS (4 yrs) versus pts with normal CG (11.3 yrs) or even pts with any CG abnormality at diagnosis (7.4 yrs). Bone marrow biopsies/aspirates are important during the course of treatment. {Mon poster-**4209**-C. Pascal}

46. A presentation on **Social Media** for Hematologists was titled "So You Know How to Treat, But Do You Know How to Tweet?" and discussed the increased usage of Twitter during ASH15 from more than 5K participants, including a number of support group leaders (SGL) in attendance. For a summary of all the SGL tweets, use the hashtag #IMFASH15.

47. **Palliative Care** is a multidisciplinary approach to symptom management, psychosocial support, and assistance in treatment decision-making for both patients with serious illness and their families. Unlike Hospice, PC does not require either a terminal diagnosis or proximity to death. In the US there are >6500 board-certified palliative medicine physicians and >18,000 certified non-physician palliative care professionals who work together with a patient's other doctors to provide an extra layer of support. PC in the setting of SCT should be considered from the day of diagnosis and tied to need, not to prognosis. How do we balance the trade off in which life may be prolonged and cancer cured, but quality of life is poor? PC has particular relevance in oncology given recent studies which link PC to improved patient QOL, improved survival, and decreased cost of care.

SUMMARY

For someone diagnosed with stage III MM 21 years ago with only 2 treatment options available (MP or VAD-SCT) and given 2-3 years expected survival, I've seen incredible progress since 2000, and especially this past year 2015. While there continue to be unanswered questions, we now have many more effective treatments for MM, providing patients with better opportunities to manage their disease.

GLOSSARY (according to Jack)

Drug Class/Category
IMID – Immunomodulary Drug
PI – Proteasome Inhibitor
mAb – Monocloncal Antibody

Drugs (brand name)
C – Cyclophosphamide (Cytoxan)
Cfz – Carfilzomib (Kyprolis)
D – Daratumumab (Darzalex)
E – Elotuzumab (Empliciti)
I – Ixazomib (Ninlaro)
M – Melphalan
P – Prednisone
Pano – Panobinostat (Farydak)
Pom – Pomalidomide (Pomalyst)
R – (Lenalidomide) Revlimid
S – Isatuximab (SAR650984)
T – Thalidomide
V- Velcade (Bortezomib)

Treatment Success Measurements
EFS – Event-free Survival
ORR – Overall response (>=PR)
OS – Overall Survival
PD – Progressive Disease
PFS – Progression-free Survival
PFS2 – PFS + next-line treatment PFS
TTP - Time to Progression
TTR - Time to Respond

Treatment Response
CR – Complete Response: No sign of MM (0 M-spike)
nCR – Near CR (positive M-spike, may be same as VGPR)
MR – Marginal Response: 0-50% reduction in MM
PR- Partial Response: 50% reduction in MM
SD – Stable Disease i.e. no response but also not worse
sCR-Stringent CR: CR+ normal FLC & no clonal cells
VGPR – 90% reduction in MM
MRD – Minimum Residual Disease typically by Flow Cytometry (NGF) or DNA sequencing (NGS) to provide more accurate measure of MM.

Side Effects
AE (ASE) – Adverse Event (Adverse Side Effects)
DVT - Deep Vein Thrombosis (blood clots)
MTD – Maximum Tolerated Dose
ONJ – Osteonecrosis of the Jaw
PE – Pulmonary Embolism
PN – Peripheral Neuropathy
QOL – Quality Of Life
VTE - Venous Thromboembolism (PE + DVT)

Tests/When to treat?
CRAB – High Calcium, Renal, Anemia, and Bone…
CRABi – CRAB + "i" increased infections
FLC – Free Light Chain

SCT – Auto stem cell transplant.

"d" and "D" – Typically both mean Low-dose Dex (40 mg/week) these days
MGUS – Monoclonal Gammopathy of Undetermined Significance
SMM – Smoldering MM
Pt(s) – Patient(s)
R/R- Relapsed/Refractory Ref defined progressing while on Tx or within 60 days.