February 19, 2007 Conference
Leukemia/BMT Day Care Unit
2733 Heather Street, Vancouver, BC
9:00 a.m. – 10:00 a.m.

Present:

Julye C. Lavoie, MD (Member, Leukemia/BMT Program; hematologist)
Marc Shapiro
Jeffrey Bodé (conference secretary)
Sharon Bodé (editor)

History since last conference:

Four chemotherapy cycles completed.

Marc: Neupogen at initial dosage caused severe pain lower back/pelvis/hips. At reduced dosage and with side meds pain now tolerable. Julye: Pain was to be expected there, for in adults most marrow is in the pelvis and great bones, and with neupogen the marrow expanded while bone remained fixed.

Donor compatibility (Julye):

It has been hard to find a match. An 8/10 match was found, but she has heard that a recent 9/10 match is being studied and if the 9/10 donor turns out to be in good health then that may be their recommendation. She does not judge the suitability of donors for her own patients such as Marc: a different and disinterested doctor makes the call. If the 9/10 donor is not healthy, then they will need to balance the risks of using the 8/10 match against those of continued chemotherapy during a further search. Relative lack of knowledge for weighing those risks: details of Marc's unique allenes – importance of matching some allenes known, the significance of some others not known – rarity of γδ lymphoma vs. B-cell (Marc is 2006 γδ case #3/3, a lot for one year) – worldwide occurrences too few to generalize about outcomes, especially as treatments have changed in last decade (e.g., CHOP vs. CHOP+GDP). Nevertheless, she believes γδ to be most like peripheral T-cell for treatment: high-dose chemotherapy + radiation therapy + transplant.

Transplant preparative regimen (Julye):

Once a healthy, willing donor has been matched, a Date of Admission will be set. In hospital, Marc may first undergo total body irradiation (TBI) 2 to 3 times/day for 3 days. TBI gives a low dose of radiation to the entire body, except the lungs and heart which are shielded. TBI would destroy Marc's immune system so it cannot attack the donor's cells. Possible side effects include sterility, nausea at the time of irradiation, peritonitis, dry mouth, heart- and throat-burn (mucosal irritation). TBI also destroys cancer cells throughout the body, but the dose is low so that healthy cells can recover. Thus, TBI alone cannot eliminate all cancer cells. Therefore, for the next 3 days Marc would undergo high-dose chemotherapy. A central (Hickman) line will

be installed to infuse the drugs and save his arms. Or, chemotherapy may precede TBI [the sequence was not sorted out].

Meanwhile, the donor's stem cells would be harvested locally. The cells cannot be cryogenically preserved: they must be flown fresh from wherever straight to Vancouver and be infused within 24 hours after donation – the window is 48 hours but they aim short to provide a safety cushion. During that time, the BC Cancer Agency would need to make the infusion machine and a bed available for Marc. For these logistics to be possible, the preparative regimen must be closely scheduled.

Post-transplant (Julye):

Marc will remain be in hospital with a central line for about 3 weeks post-transplant. Meanwhile, Marc will initially be unable to swallow, so he will have a suction tube for saliva and a feeding tube. He will feel pain, for which he will receive a constant low dose of morphine which he can supplement within controlled limits by self-dosing. Fever will be controlled with antibiotics and possibly antifungals. He will probably be able to talk but won't want to.

The grafted cells need 2 to 3 weeks to begin to produce new blood. During his hospitalization and for about 6 months afterward, Marc will need periodic transfusions of red blood cells and platelets from an unrelated donor. The risks from blood transfusions include immune reactions to platelets (mostly in women who have had children), and a 1-in-100,000 chance of disease transference despite screening. No directed blood is allowed and consent to unrelated blood is part of the signed consent to the transplant.

For 3 months after discharge, Marc must come into day care 3 to 5 times/week, where he will be given 10 to 12 different types of pills. Some (e.g. cyclosporin) are immunosuppressant to prevent the desired graft-versus-host effect from escalating to graft-versus-host disease (GVHD) manifested by rash, nausea, diarrhea, and liver problems. The treatment for GVHD is steroids, with around 50% of patients responding to prednisone, but diabetes is a possible side effect. [cyclosporin + methotrexate . . . ?]

Return to work after an unrelated transplant generally takes 18 to 24 months. The highly demanding nature of Marc's former work makes unclear what type of work he will be able to do, for he will certainly not be the man he was before.

Overall (not specific to γδ lymphoma), the risk of chronic GVHD (dry eyes and mouth, stiff joints, skin thickening and discoloration, lung problems) is 20%. The risk in the first year of death is 40-50%—Marc's youth and strength tend to suggest the low end of the range. The risk of recurrence is 20%.

Marc will need a caregiver for [at least] 4 to 6 months after the Date of Admission. Even after discharge he may be unable to drive home from day care, for example.

[end]