Nutational Infrasonic Liposculpture (NIL) Adipose Derived Regenerative Cell Concentration and Viability Study Summary

Millennium Medical Technologies and Medical Alliance Services are pleased to announce that an independent scientific stem cell study has been completed by Dr. Thomas Barnes, MD, FAACS, Director of The Cosmetic Surgery and Laser Institute of Newport Beach, CA and Dr. Ahmed Al-Qahtani MD, PhD, a professor of Immunology at UC Irvine comparing a new method and technique to yield human adipose tissue and lipoaspirate for regenerative cell (ADRC) analysis to the traditional method.

The parallel study involved 12 patients looking at regenerative cell concentrations and viability analysis of stromal vascular fraction (SVF) cells taken from manual lipoaspiration method used in common practice today (Manual) and that of Nutantional Infrasonic Liposculpture (NIL) via looking at tumescent SVF concentrations and viability after centrifugation. Several methods of analysis were used for cell concentrations including manual hemocytometry and FACS (flow cytometry) looking at CD34+ cells. Viability was assessed by FACS and trypan blue assays. Variables were reduced by taking both methodologies (NIL and Manual) samples from the same patient and using the same instrumentation (cannula, aspirators, etc.) where applicable. The study was performed to determine if lipoaspirate acquired via NIL, due to its mechanics, is more conducive for use of regenerative cell assisted and autologous fat grafting procedures as well as for future cell therapy treatments and isolation protocols. The finding confirm as such, which according to the scientist and doctors involved is due largely impart to the apparent in-vivo dissociation process NIL instrumentation provides.

Findings

1. The lipoaspirate collected by NIL then processed, without collagenase, into SVF yielded a mean average 90% ADRC viability in comparison to that of Manual which was 72% by FACS. (see figure 1)
2. The lipoaspirate collected by NIL then processed, without collagenase, into SVF yielded a mean average of 82% CD34+ in comparison to Manual which was 50% CD34+ by FACS. (see figure 1)
3. Based on hemocytometry figures and taking average viability into account NIL had an average count of 337M SVF cells in the 1st SVF pellet while Manual had 172M SVF cells. (see figure 2)
4. Extrapolating these numbers we can confidently derive that per 50cc of lipoaspirate, on average, there was 276M CD34+ cells in the SVF of the non-collagenase sample for NIL and 86M CD34+ in Manual SVF. (See Figure 2)

FIGURE 1

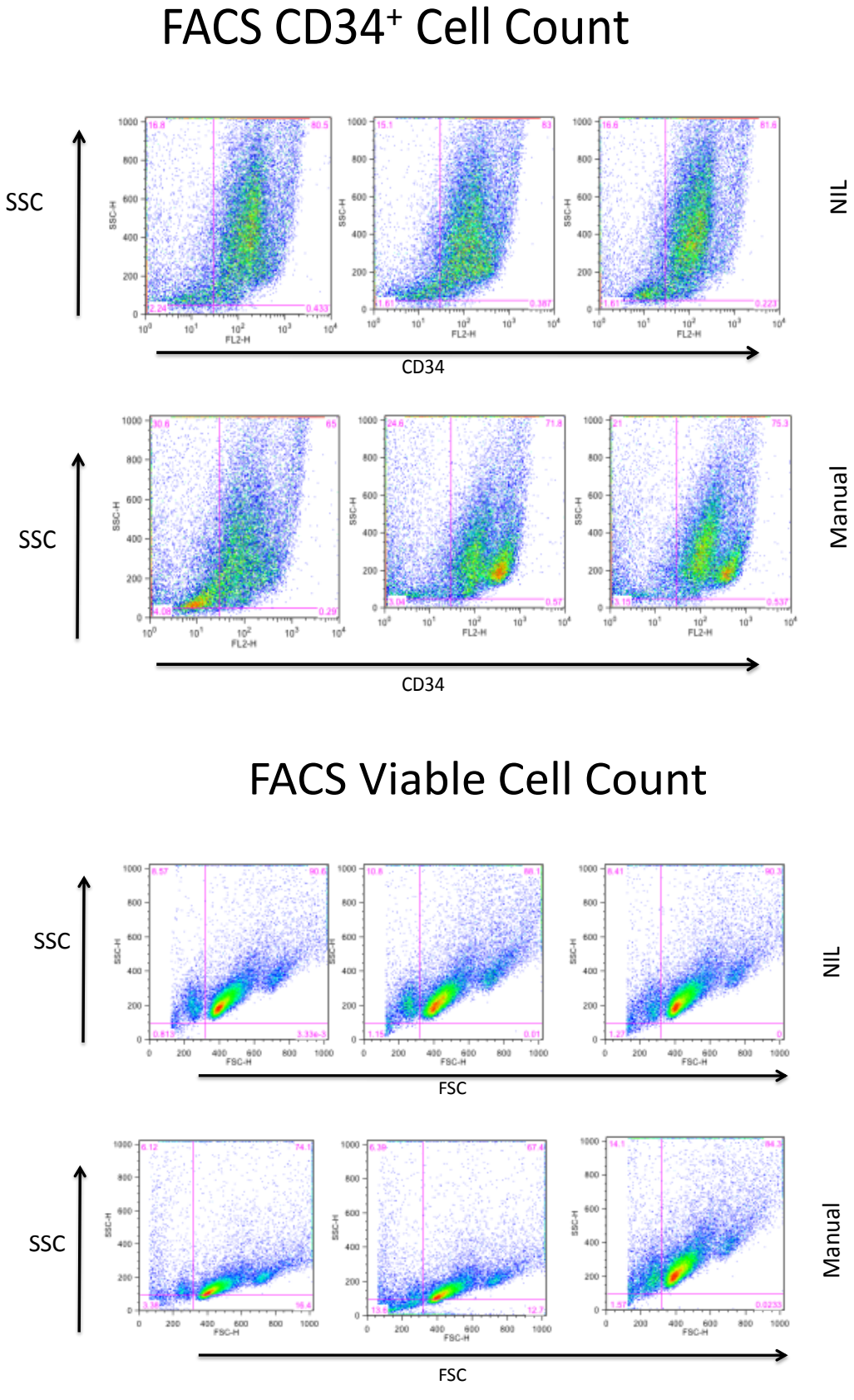
FACS CD34+ Cell Count
SSC
CD34
NIL
Manual
FACS Viable Cell Count
FSC

FIGURE 2

Average ADRC Cell Total (CT) Per 50cc of Lipoaspirate