

# Progenics Cord Blood Cryobank Monthly Quality Report



2013-2016





## Report Summary

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This quality report summarizes the processing results from all of the cord blood samples processed by Progenics Cord Blood Cryobank from January 01, 2013 to December 31, 2016. The quality indicators referenced in this report look at 3 key variables: the yield of total nucleated cells (TNC); total viable nucleated cells (TVNC), and; CD34+ viability.

The following report compares the average monthly and annual percentage yield of TNC including stem cells, the average percentage of total viable nucleated cells, and the average percentage of viable CD34+.

Progenics uses a *modified double stem cell extraction processing technique* which ensures that a higher number of nucleated cells are banked for future use, when compared with the industry average. Based on this technique, the average recovery rate for TNCs banked has been 98% on average, which is significantly greater than the guaranteed quality standard Progenics offers to each client.

Table 4: 2017 Monthly Report

Progenics Cord Blood Cryobank 2017 Monthly Report			
Month of	TNC and Stem Cell Yield (%)	NC Viability (%)	CD34+ Viability (%)
January	98.24	95.20	99.30
February	97.84	95.64	99.38
March	98.06	95.09	99.22
April	97.88	95.29	99.10
May	97.95	95.63	98.91
June	98.27	95.07	99.50
July	98.24	94.71	99.35
August	97.78	93.97	99.24
September	98.07	93.63	99.12
October	97.96	96.22	99.15
November	97.93	94.54	99.40
December			
Annual average	98.02	95.00	99.24
	Refer to Figure 4(a)	Refer to Figure 4(b)	Refer to Figure 4(c)

**Notes:**

**TNC** TNC includes all nucleated cells such as stem cells and nucleated red blood cells.

**TVNC** TVNC refers to total viable nucleated cells.

**CD34+** Hematopoietic progenitor cells

**Viability** Cell viability is a determination of whether cells are living or dead, based on a total cell sample. The viability of cells is evaluated by either measurement of cell membrane integrity or by measuring certain functions of the cells from a total cell sample.

Figure 4(a)

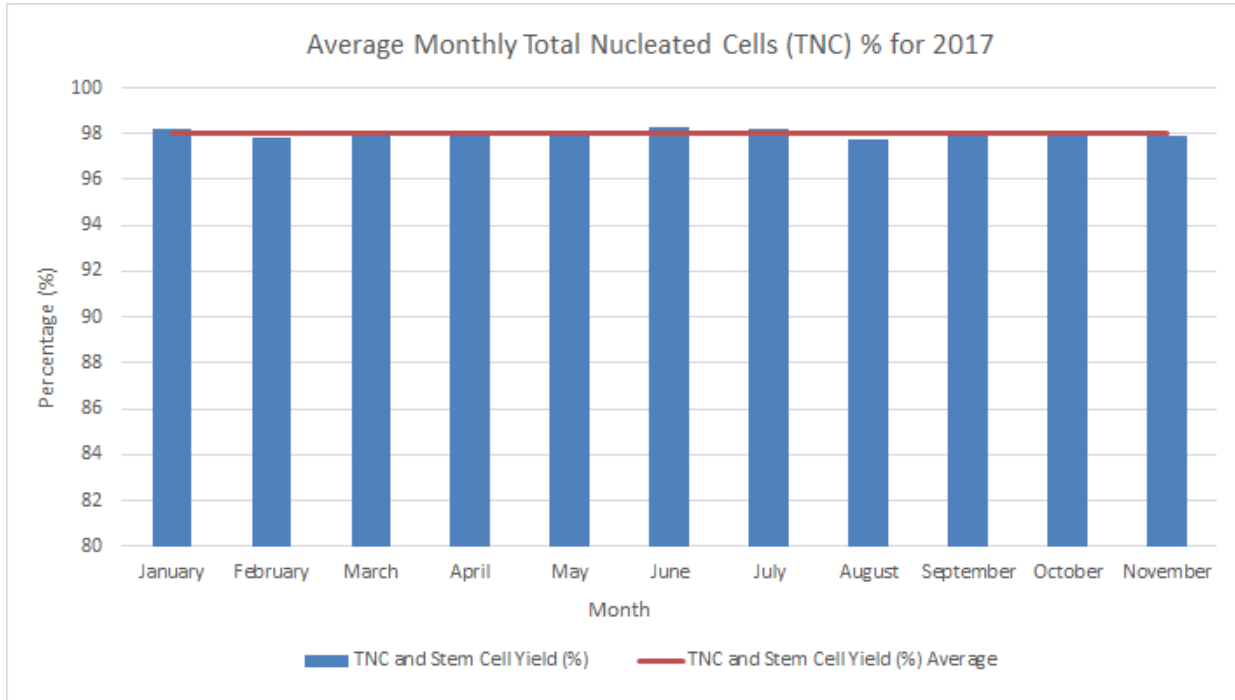
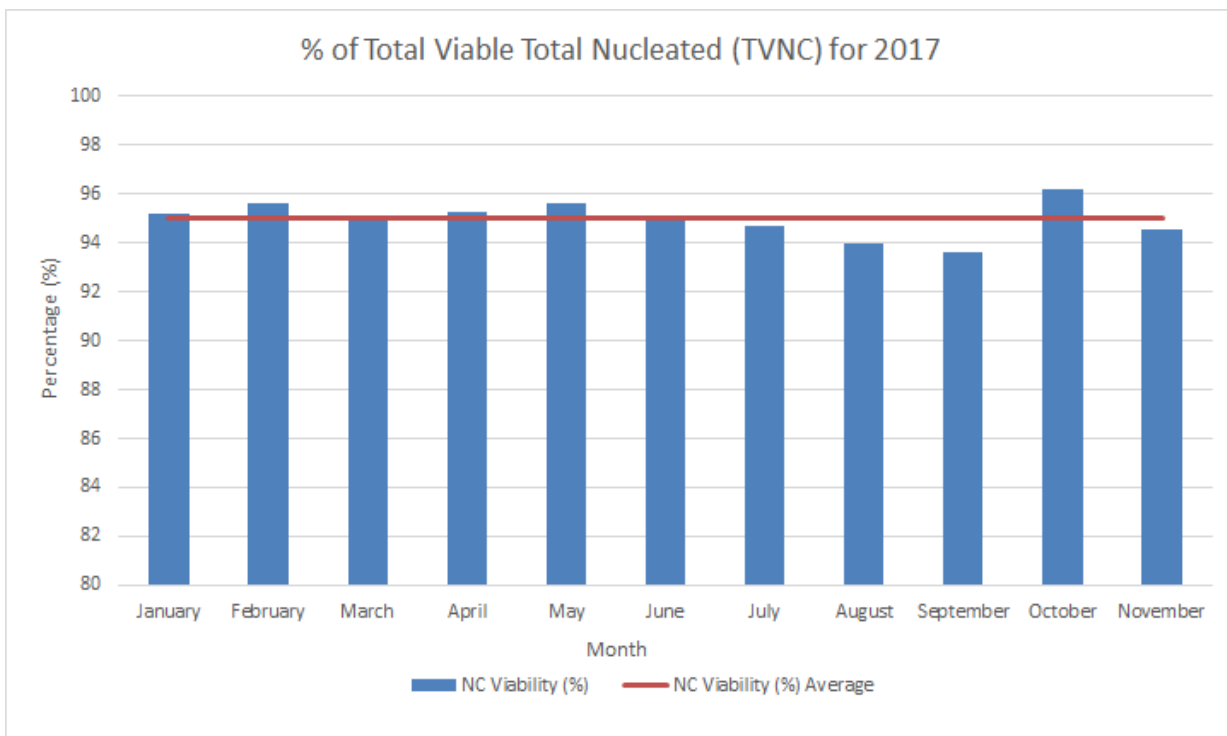
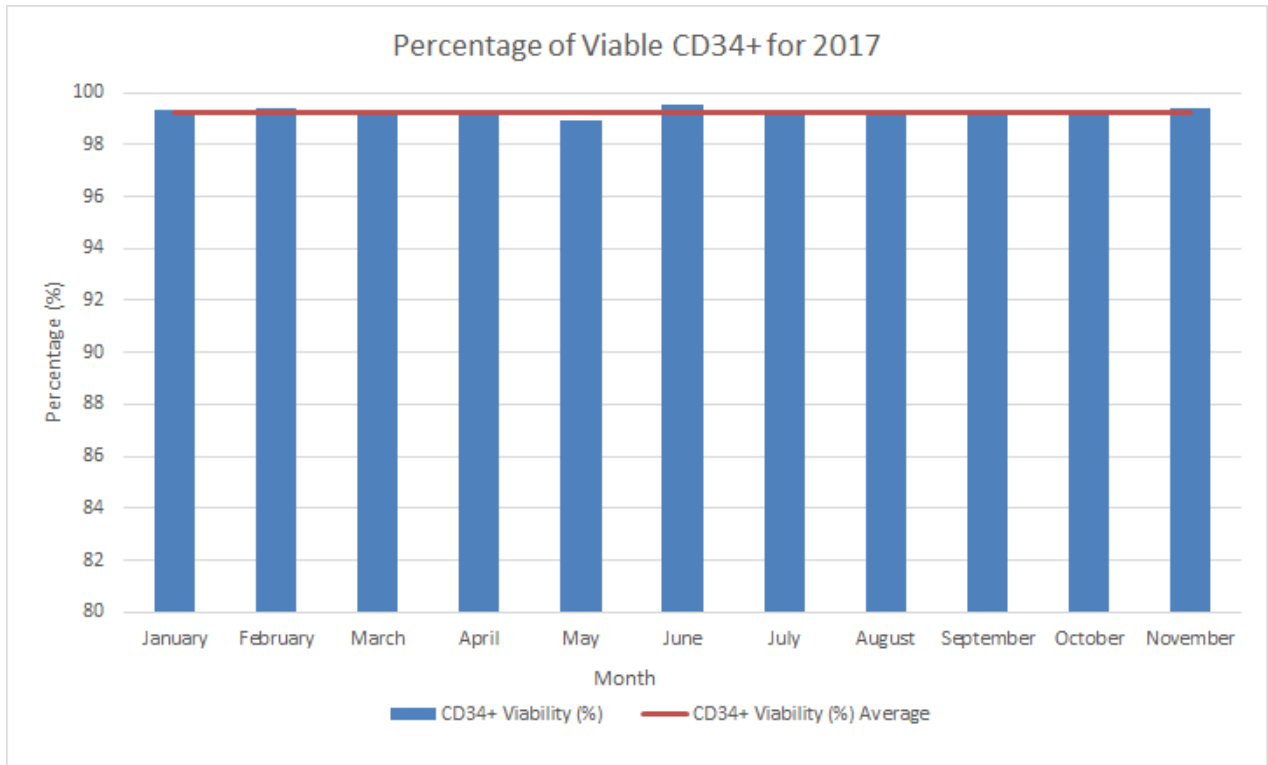


Figure 4(b)



**Figure 4(c)**



## Conclusion: Comparing Annual Averages

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Based on the above data, we can confidently report that for  $\bar{x}$  :

- ✓ The average annual percentage yield of **total nucleated cells (TNC)** was: **98.8%**.
- ✓ The average annual percentage of **total viable nucleated cells (TVNC)** was: **8%**.
- ✓ The average annual percentage of **viable CD34<sup>+</sup>** cells was: **98.99%**.

The above results have been made possible due to our *modified double stem cell extraction processing technique*.

It is important to note that we offer a quality guarantee policy to all of our clients which states that their cord blood unit (CBU) will contain a minimum of 85% yield of total nucleated cells (TNC). Once a client's CBU has been processed, and all processing parameters meet our cord blood bank acceptance criteria, the client will receive a *Certificate of Cryopreservation* which indicates the amount of TNC including stem cells processed within their sample.

Significantly, the above results indicate that the outcome of our quality processing surpasses our internal quality standard by over 10%!

After reviewing the data within this report, we can confidently claim that we offer our clients the highest cord blood processing results in the industry.