

Stability of Bevacizumab (Avastin) after Withdrawal into a Syringe and Refrigeration or Freezing

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PURPOSE

To assess the stability of bevacizumab (Avastin) over time after withdrawal into a syringe and refrigeration or freezing using differing techniques of measurement.

METHODS

Bevacizumab was drawn up into syringes and the biological activity was assessed at varying time points. The time-points included 1 week, 3 months and 6 months. Measurement of the biologic activity was ascertained using a VEGF saturation technique. Additionally, HPLC was used to assess molecular degradation and these results were correlated with the functional assay.

RESULTS

The concentration of bevacizumab activity decreased progressively in the 1 week, 3 month, and 6 month samples stored at 4°C. The bevacizumab drawn into the syringe and stored at 4°C was degraded by 1.68% at 1 week, 8.86% at 3 months, and 15.76% at 6 months. It was difficult to obtain reliably interpretable results from HPLC.

CONCLUSION

Bevacizumab showed significant degradation by 3 and 6 months of its measurable biologic activity. HPLC proved to be of limited usefulness in assessing bevacizumab stability with the techniques used.