

## **JL10. Subcutaneous Administration of Bortezomib: A Pilot Survey of Oncology Nurses**

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*Background:* The subcutaneous (SC) route of administration for bortezomib was approved in the United States in January 2012 in addition to the intravenous (IV) route. Although there is limited guidance in the US Prescribing Information regarding how to administer SC bortezomib, more broadly there is a lack of clear direction in the literature on administering SC chemotherapy. Studies in non-oncology fields suggest that injection site reactions, pain, and bruising can be reduced by using short needles injected at 45 degrees into skin folds, practicing the air bubble rather than purge technique, and slower injections. Inconsistent or poor administration techniques may increase injection site reactions and could contribute to patients stopping effective treatment. It is important to identify how oncology nurses are administering SC bortezomib. This observational survey of oncology nurses practicing in community oncology clinics aimed to identify the techniques used and explore nurses' opinions about SC bortezomib administration. *Methods:* A 44-question electronic survey on SC bortezomib administration was developed, with all questions based on current literature regarding appropriate techniques for administering SC injections. Questions were also included regarding convenience of SC administration, nurses' opinions on patients' preferences for administration site, and correlation between facility layout and administration site. *Results:* A total of 43 oncology nurses from 17 clinics responded to the survey. Advanced Practice Nurses (APRNs) shared the responsibility with oncologists for ordering SC bortezomib according to 53% of respondents. Nurses reported using the abdomen (98%), thigh (19%), and arm (53%) for SC bortezomib. Nurses used 25 gauge 5/8 inch (42%) and 27–30 gauge  $\leq 1/2$  inch (56%) needles, with both 45 degree (61%, 42%) and 90 degree (39%, 58%) angles of insertion used with these respective needle sizes ( $p=0.21$ ). The air purge technique was used by 49% of nurses, with 51% using an air bubble technique. Nurses took 3–5 (49%), 5–10 (35%), 10–30 (9%), and > 30 seconds (7%) to administer each milliliter of SC bortezomib injection. *Conclusions:* These findings indicate the heterogeneity of techniques used for SC bortezomib administration. APRNs may consider evaluating SC injection techniques used in practice settings, even where guidelines are in place, in order to promote consistent caring practice and professional evidence-based collaboration.