

An Alternative Route of Administration in Oncology Treatment

Exploring potential benefits of subcutaneous (SC) administration of oncology treatments



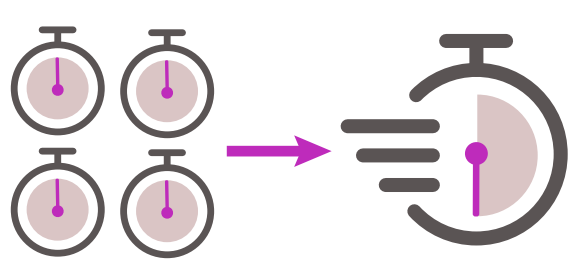
5-year relative survival rate for all cancers has **increased from 49% to 68%**^{1*}

As oncology treatments continue to help certain patients live longer, there remains a need for additional administration options that account for healthcare resources and the patient experience.²⁻⁴

Potential Benefits of SC Drug Administration

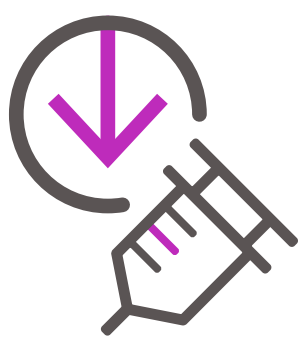
Currently available oncology treatments may require long infusion durations, venous access for drug administration, and significant preparations.² SC drug administration may help address these concerns through:

Time Savings and Improved Resource Utilization



Reduced patient chair times, allowing patients and caregivers more personal and work time^{4,5}

Reduced facility and overall active HCP time spent on drug administration and preparation⁴



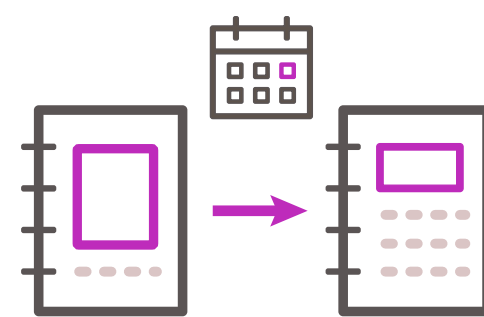
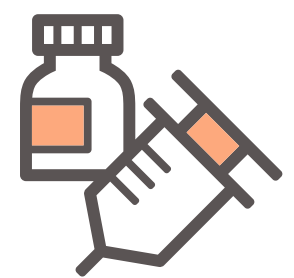
Potentially reduced number and frequency of individual injections^{3,4}

Convenience and Optionality



Research shows patients prefer having SC treatment options⁴⁻⁶

Convenient, single injections eliminate a need for cannulation or venous access and may minimize patient discomfort^{5,6}



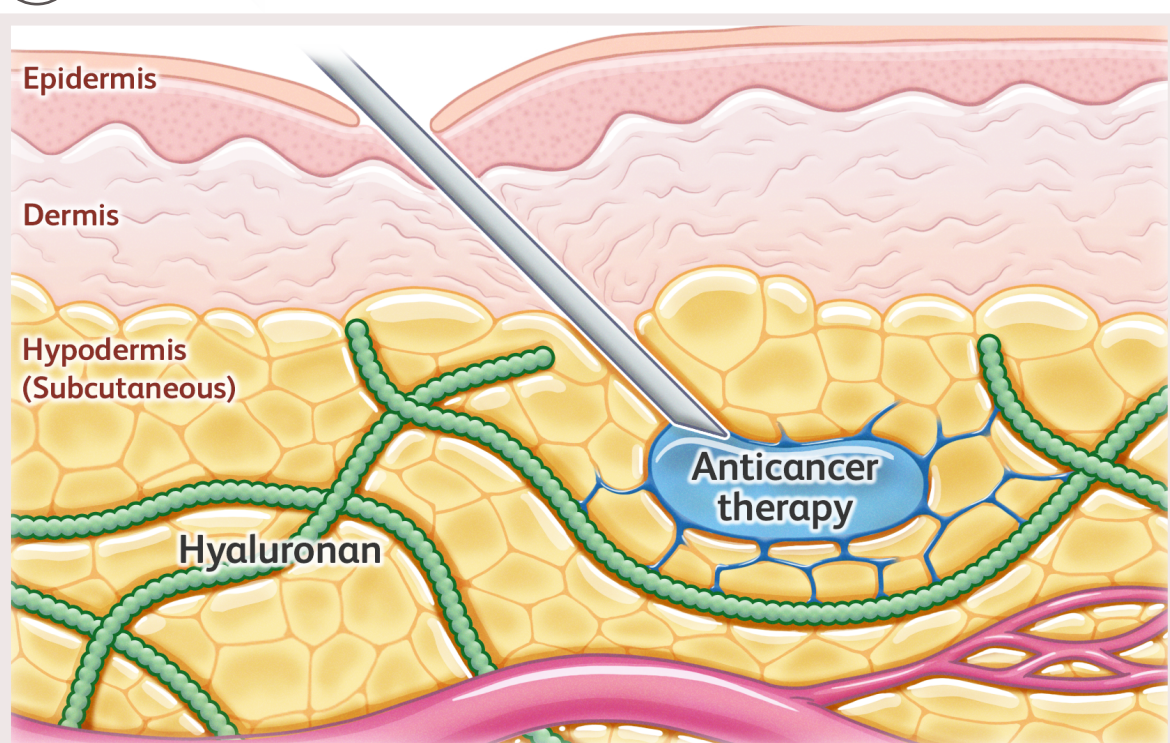
Flexible appointment scheduling provides patients with options to plan their days⁶

Research suggests that SC administration of oncology treatments may provide patients with additional options and flexibility, while saving facility and overall active HCP time through savings in drug preparation and administration time.^{4,6}

Hyaluronidase as a Permeation Enhancer for SC Drug Delivery

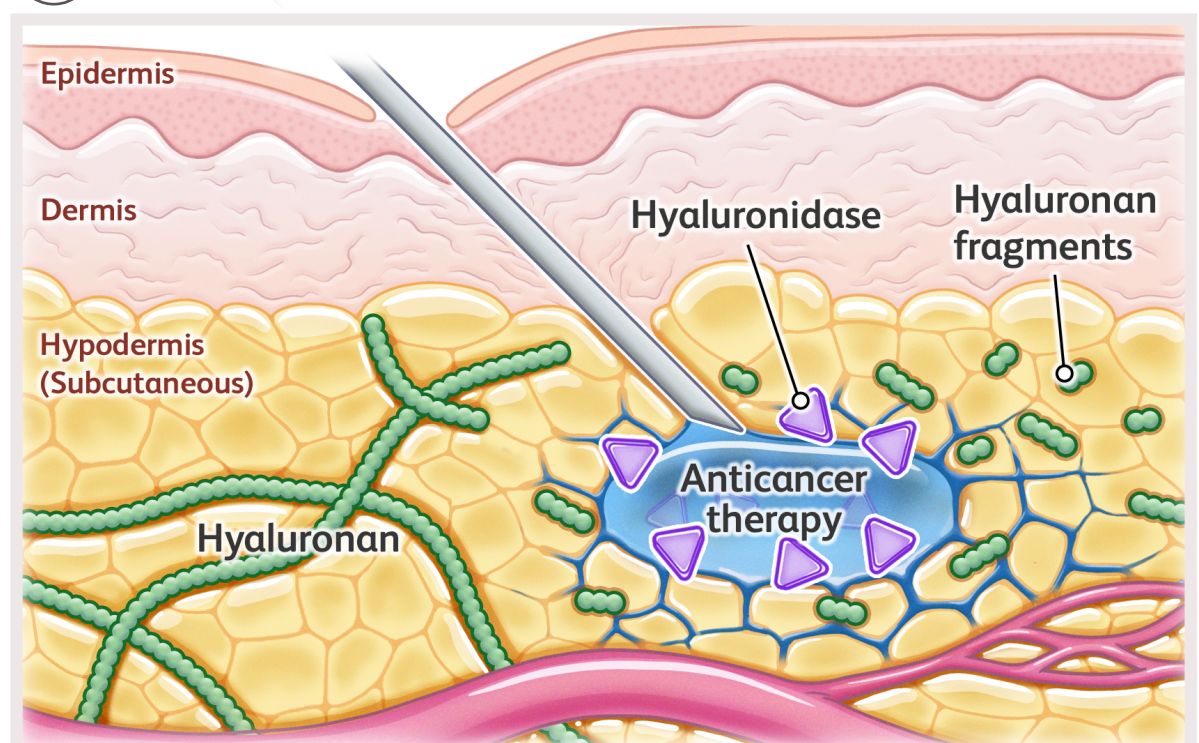
SC therapies are coformulated with recombinant human hyaluronidase to facilitate rapid delivery of large volumes via a single injection. Hyaluronidase is approved for coformulation with several anticancer treatments on the market.^{2-4,7}

1 SC Drug Delivery^{3,8}



Hyaluronan is a component of the extracellular matrix (ECM) that forms a gel-like substance with water, limiting large volume SC drug delivery, dispersion, and absorption.³

2 SC Drug Delivery + Hyaluronidase^{3,8}



Hyaluronidase is an enzyme that temporarily degrades hyaluronan. SC administration of anticancer therapies coformulated with hyaluronidase allows for the dispersion and absorption of larger volumes which would otherwise be restricted by the gel-like substance of the ECM.^{2,3,7}

BMS is committed to developing SC immuno-oncology therapeutics to help reduce treatment burden and provide appropriate patients with alternative treatment options.

*For diagnoses made in the mid-1970s to 2012-2018¹

ECM=extracellular matrix; HCP=healthcare practitioner; SC=subcutaneous

References: 1. Siegel RL et al. *CA Cancer J Clin.* 2023;73:17-48. 2. Dent S et al. *Curr Oncol.* 2019;26(1):e70-e80. 3. Locke KW et al. *Drug Deliv.* 2019;26(1):98-106. 4. Anderson KC et al. *Future Oncol.* 2019;15(28):3267-3281. 5. Harvey MJ et al. *PLoS One.* 2022;17(1):e0261336. 6. Jackisch C et al. *Adv Ther.* 2022;39(2):833-844. 7. DuMond B et al. *J Oncol Pharm Pract.* 2021;27(5):1214-1221. 8. Usach I et al. *Adv Ther.* 2019;36(11):2986-2996.