



Calculation of the amount of 5-FU injected in the patient with 133 IGH lesions:

DATA and FORMULA

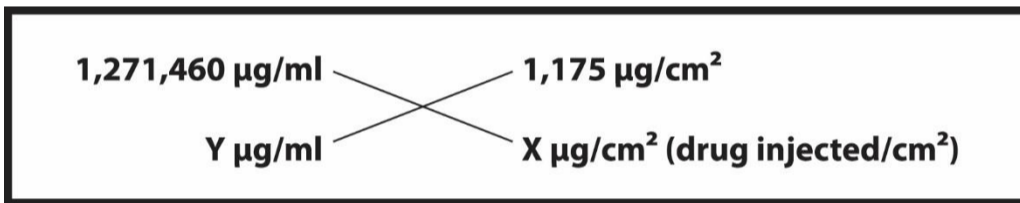
1 **DEFINITION 1:** Each 10mL endovenous Fluorouracil vial (FAULDFLUOR) has 500 mg of 5-FU. Therefore, 1 mL of the solution has 50 mg of 5-FU.

2 **DEFINITION 2:** Weight of 1 ml endovenous Fluorouracil (FAULDFLUOR® Libbs) measured by the first author using a precision scale: 1,031,498 µg/ml.

3 Total area of 133 IGH lesions, considering that average diameter of each lesion is 4 mm:

$$A = r^2 \times \pi. (2)^2 \times 3.1416 \times 133 \text{ lesions} = 1,671.3312 \text{ mm}^2 \approx 16.7133 \text{ cm}^2$$

4 We used this formula to calculate the density of the 5-FU solution injected in 1 cm² of skin¹:



$$1,175 \text{ µg/cm}^2 \times 1,031,498 \text{ µg/ml} / 1,271,460 = 953.24 \text{ µg/cm}^2$$

5 Total density of the 5-FU solution injected in 133 IGH lesions:

$$16.7133 \text{ cm}^2 \times 953.24 \text{ µg/cm}^2 = 15,931.78 \text{ µg}$$

6 Density of 5-FU (**active ingredient**) injected in 133 IGH lesions:

$$1,031,498 \text{ µg} \dots\dots\dots 50 \text{ mg}$$

$$15,931.78 \text{ µg} \leftarrow \dots\dots\dots X$$

$$50 \text{ mg} \times 15,931.78 \text{ µg} / 1,031,498 \text{ µg} = 0.7723 \text{ mg} \approx 0.77 \text{ mg}$$

REFERENCES:

1. Arbache S, Mattos EdC, Diniz MF, et al. How much medication is delivered in a novel drug delivery technique that uses a tattoo machine? *International journal of dermatology* 2019;58:750-755.