

## Supplementary Materials:

# In Silico Simulation of the Systemic Drug Exposure Following the Topical Application of Opioid Analgesics in Patients with Cutaneous Lesions

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**Table S1.** Main assumption of the skin physiological characteristics used for prediction of opioid skin absorption.

Assumption	Source
One-dimensional Fickian diffusion is the dominant transport mechanism for the compounds selected.	[1]
Stratum corneum diffusion is dominated by lipid channels, and is a static barrier at a constant hydration level.	[2]
The formulation is assumed to be well-mixed.	[2]
Viable epidermis:dermis partition is equal to 1.	[3]
Vehicle:skin partitioning is equivalent to water:skin.	[4,5]
The plasma compartment is an infinite sink in the diffusion model of transdermal compound permeation.	[4]
In patients with lesions, stratum corneum is disrupted. The viable epidermis and dermis remain intact.	[6]
Stratum corneum does not significantly impact compound clearance or compound retention.	[7]
The compounds are not significantly cleared or retained within the skin.	[8]
The cornified layer (stratum corneum) of the skin is the main barrier to compound diffusion for intact skin.	[4]

## References

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