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## VISUAL CHARACTERISTICS FOR SEQUENCING OF OVERLAPPING BLOODSTAIN PATTERNS

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## VISUAL CHARACTERISTICS FOR SEQUENCING OF OVERLAPPING BLOODSTAIN PATTERNS

### ABSTRACT

The deposition sequence of overlapping bloodstain patterns can be valuable reconstructive information. A formal method for sequencing overlapping bloodstain patterns has yet to be published. We present a method for sequencing overlapping transfer and drip stains using visual characteristics. A survey was held amongst educated bloodstain pattern analysts to determine whether the newly acquired method will assist them in correctly sequencing these overlapping bloodstain patterns. Results showed a significant improvement of expert decisions: the percentage of overlapping stains correctly sequenced by participants increased from 57 to 79 % using the visual characteristics defined in this study. These results suggest that a decision support system can be built, which helps investigators at the crime scene to sequence overlapping bloodstain patterns.

### KEYWORDS

bloodstain, pattern, overlapping, transfer, drip, classification, sequence, decision support system

### Highlights

- A method for sequencing overlapping blood stains is proposed.
- Characteristic visual features are indicative for deposition sequence of transfer and drip stains.
- Expert decisions improve with knowledge about visual characteristics and their occurrence rates.

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