

A vibrant, abstract splash of colors including purple, blue, orange, and yellow against a white background. The colors are splattered and blended, creating a dynamic and energetic visual effect.

FORENSIC SCIENCE

BLOOD SPLATTER PART 2

Dr. Wardisiani

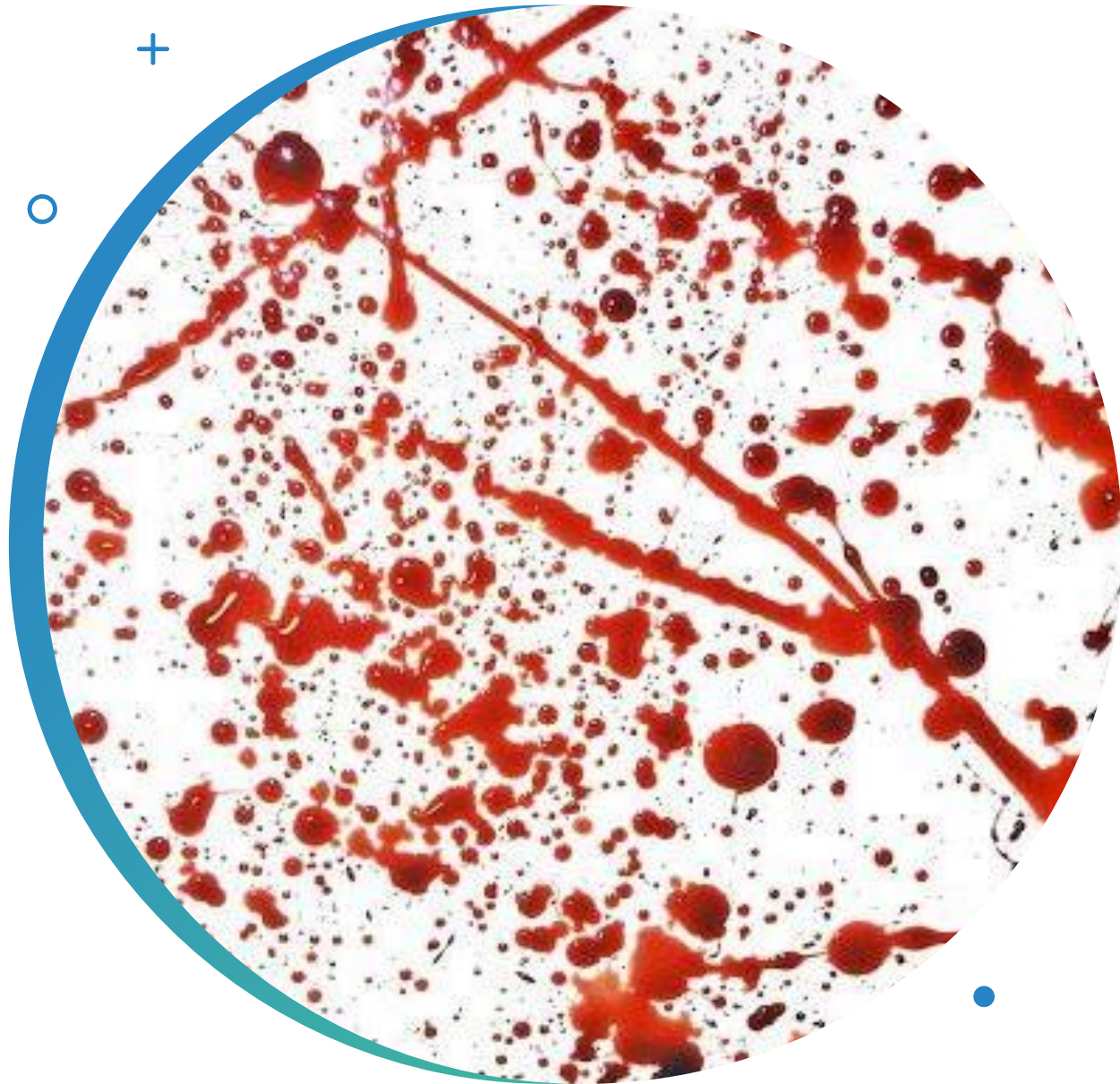
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School Year 2021-2022



Bell Ringer

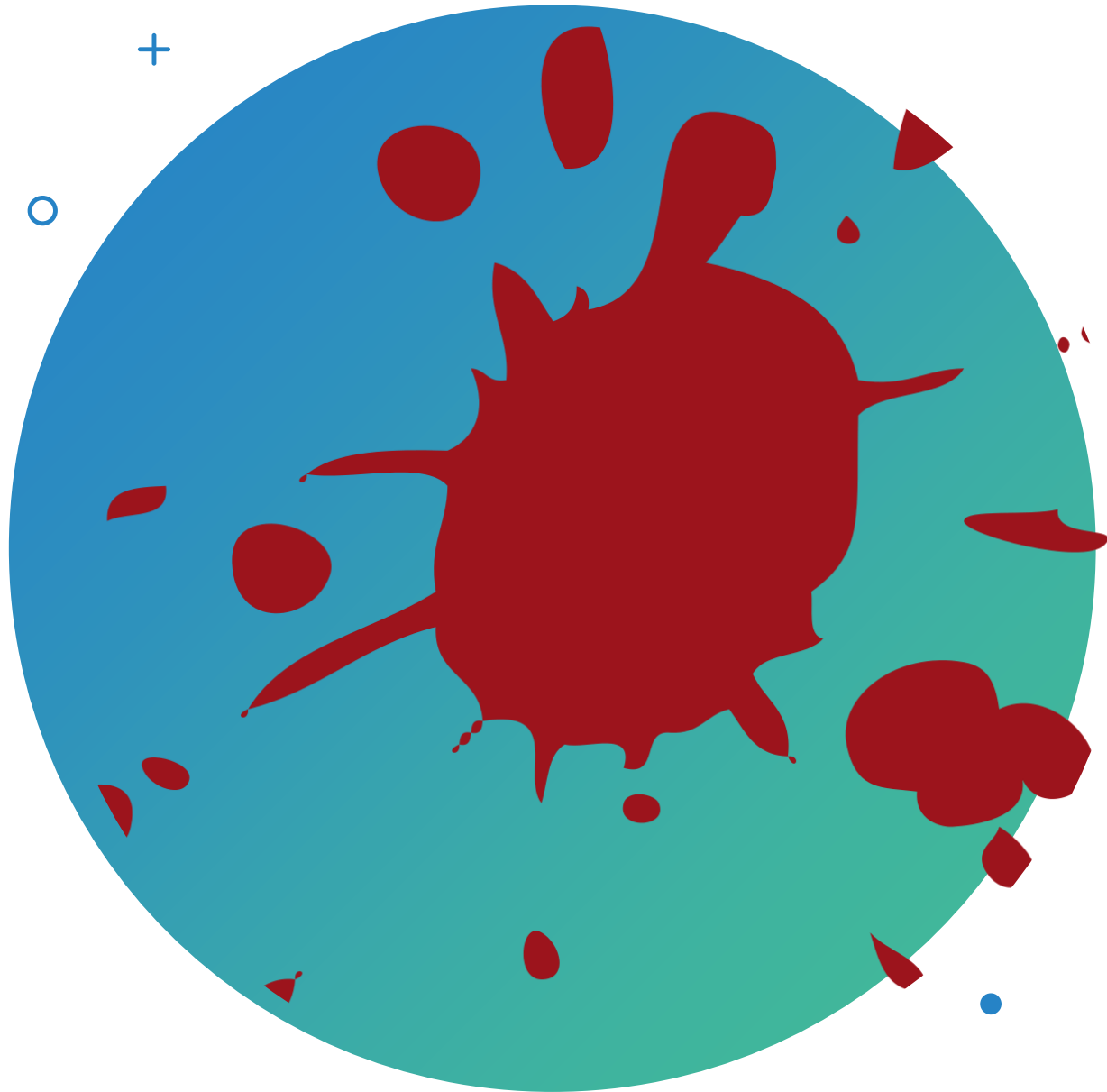
- What is the typical blood volume of an:
 - Adult Male
 - Adult Female



Bloodstains

- Diameter of bloodstain is a function of:
- Volume of the drop
- Surface texture impacts –
Rough
Smooth
- Distance fallen
- Blood drops will not break into smaller droplets unless something disrupts the surface tension

Physical Nature Of What Blood Hits

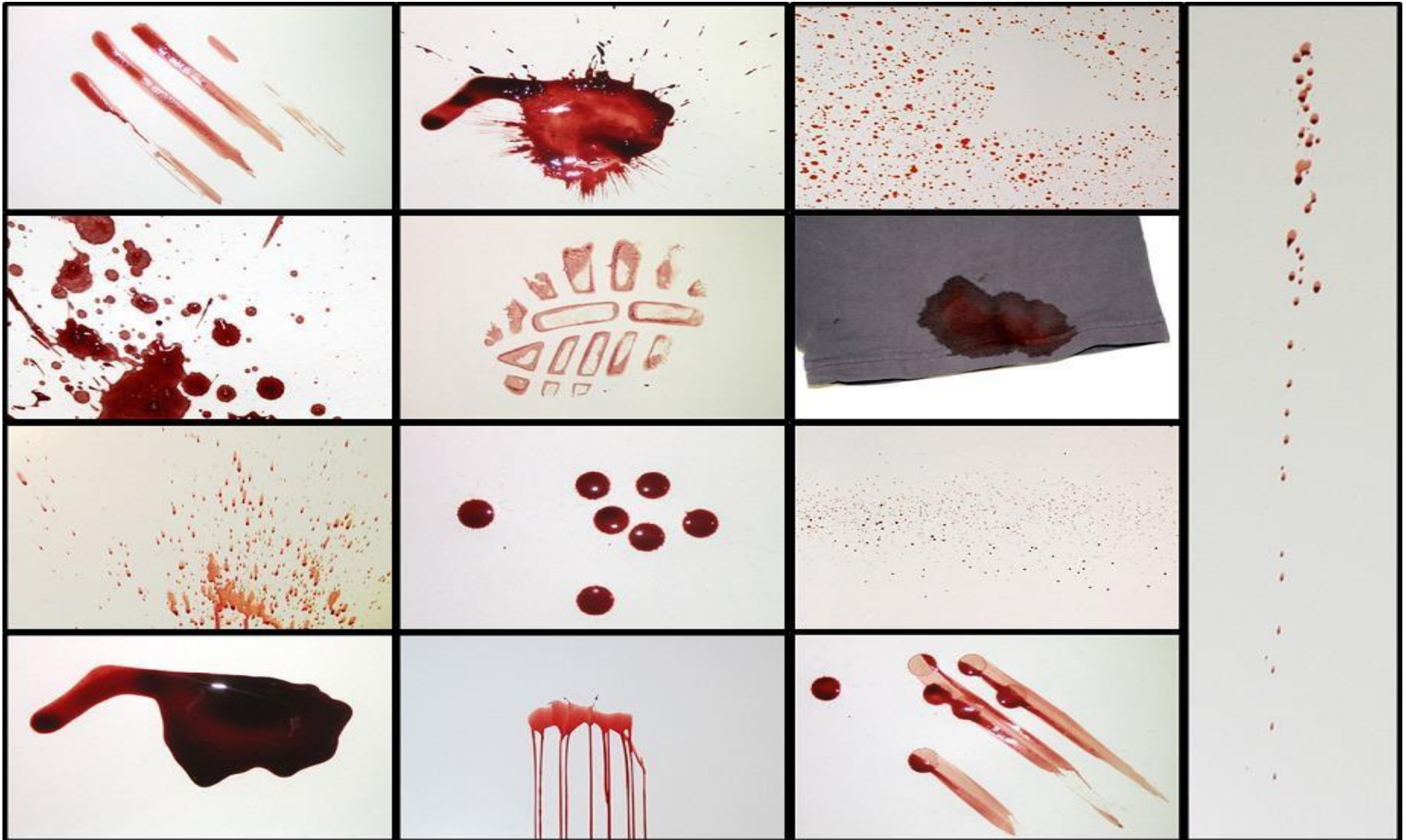


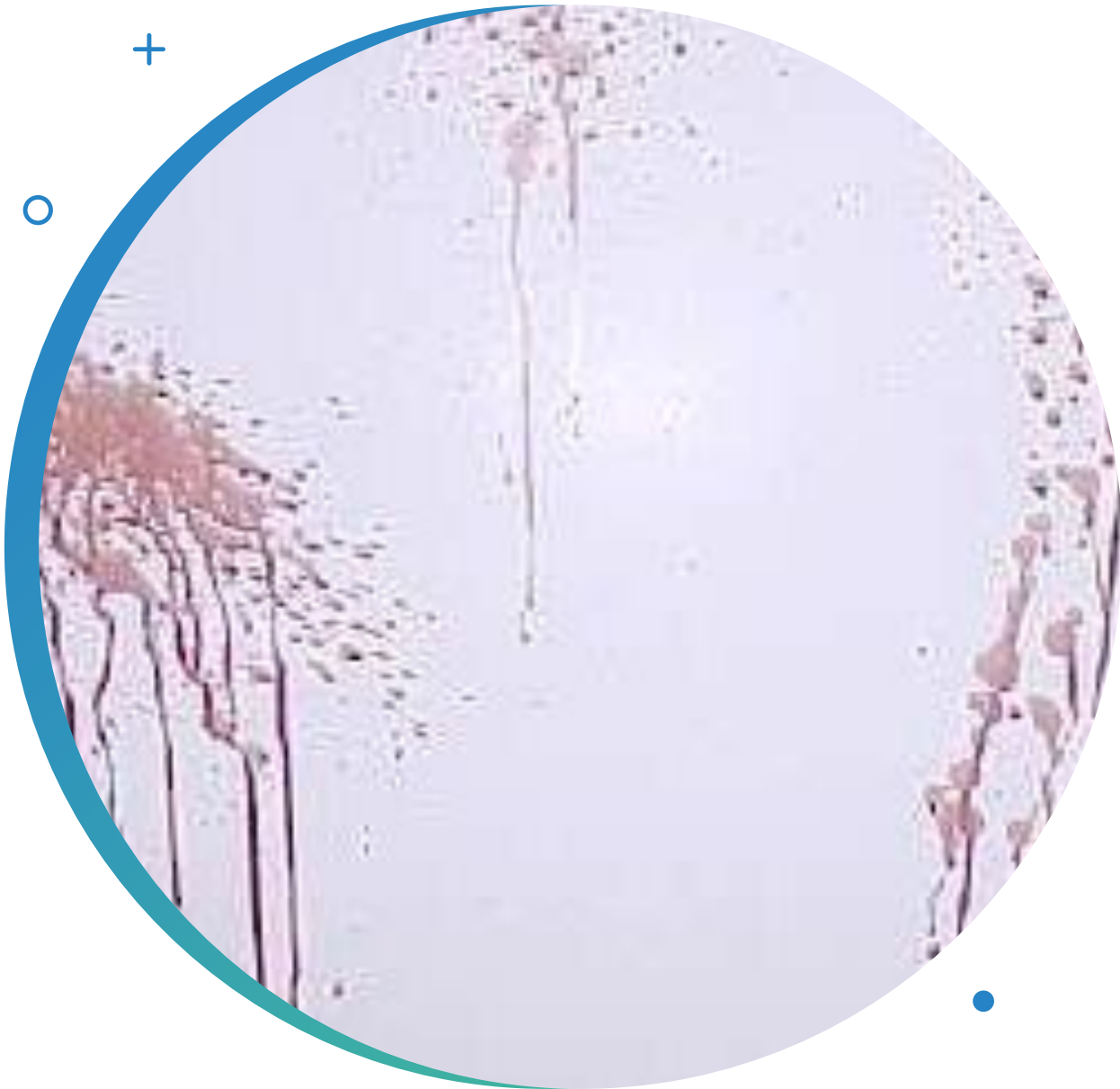
- *Hard- smooth –non-porous surface*
 - Little splatter
- *Rough texture- plywood, tile*
 - Significant splatter
- *Rough surface, with protuberance-*
 - Splatter with irregularly shaped parent stain with spiny or serrated edges

Size, Shape, Direction of Bloodstains



- Geometry determines the direction of flight
- Narrow end points to the direction of travel
- After direction of several stains is determined, the **POINT OF CONVERGENCE** is established by drawing lines through the long axis of the stain
- Point where they converge represents the relative location of the blood source in 2 dimensions- X, Y axis

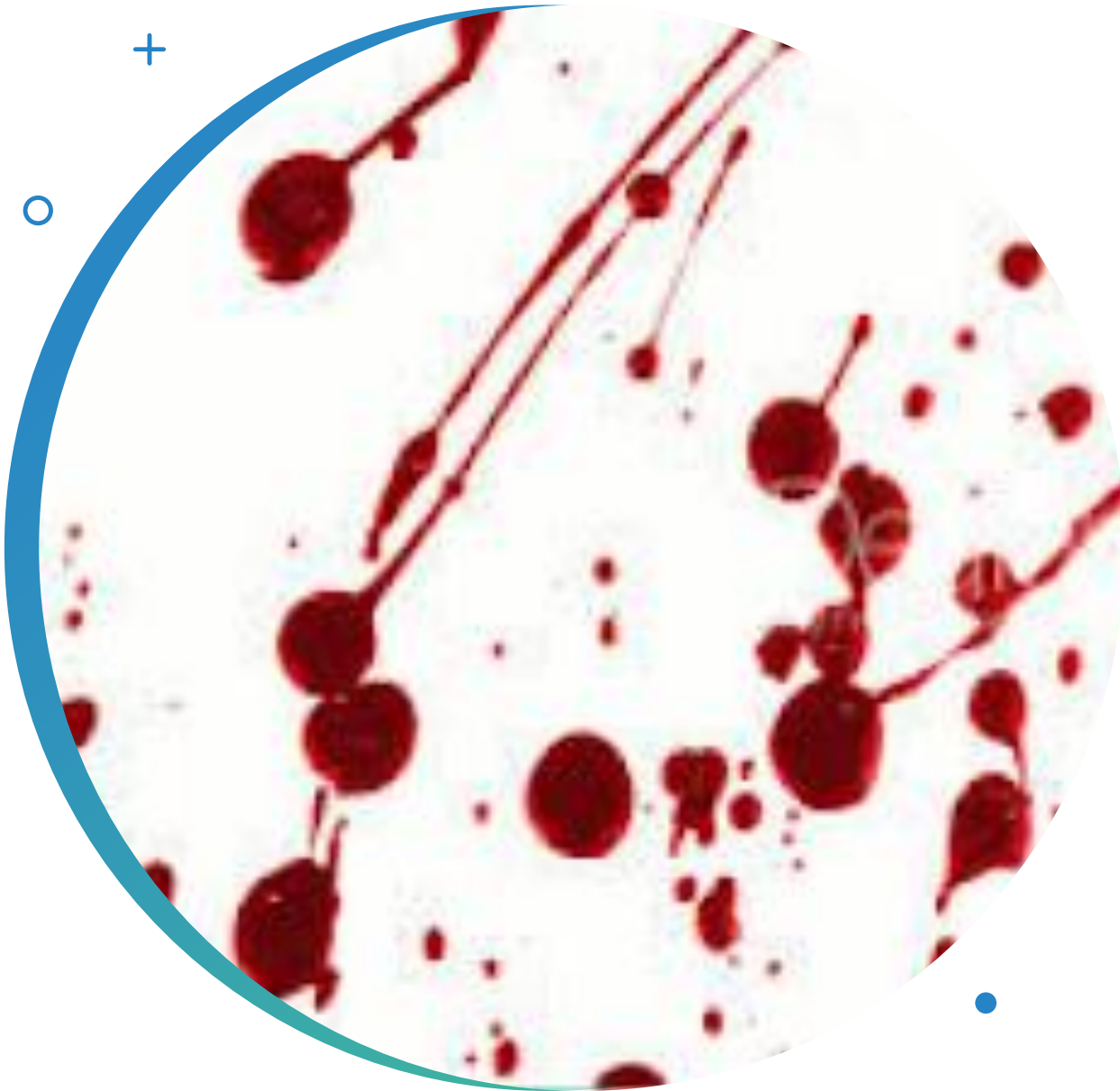




Arterial Gushing

- Very large gush, to very small spray pattern
- Severity- size of artery, clothing
- Body will show damage- autopsy will confirm

Castoff



- First blow- nothing
- Second blow-castoff created
- Blood accumulates in varying quantities on object producing injuries
- IF centrifugal force is generated by the swinging of the weapon is greater than the adhesive force holding blood to the object, blood is flung

Blood Dripping Into Blood



- **Satellite Splatter-**
when multiple blood drops hit previous blood spots

Flow Pattern



LVIS

- Force is up to 5 fps
- 4mm in diameter or greater



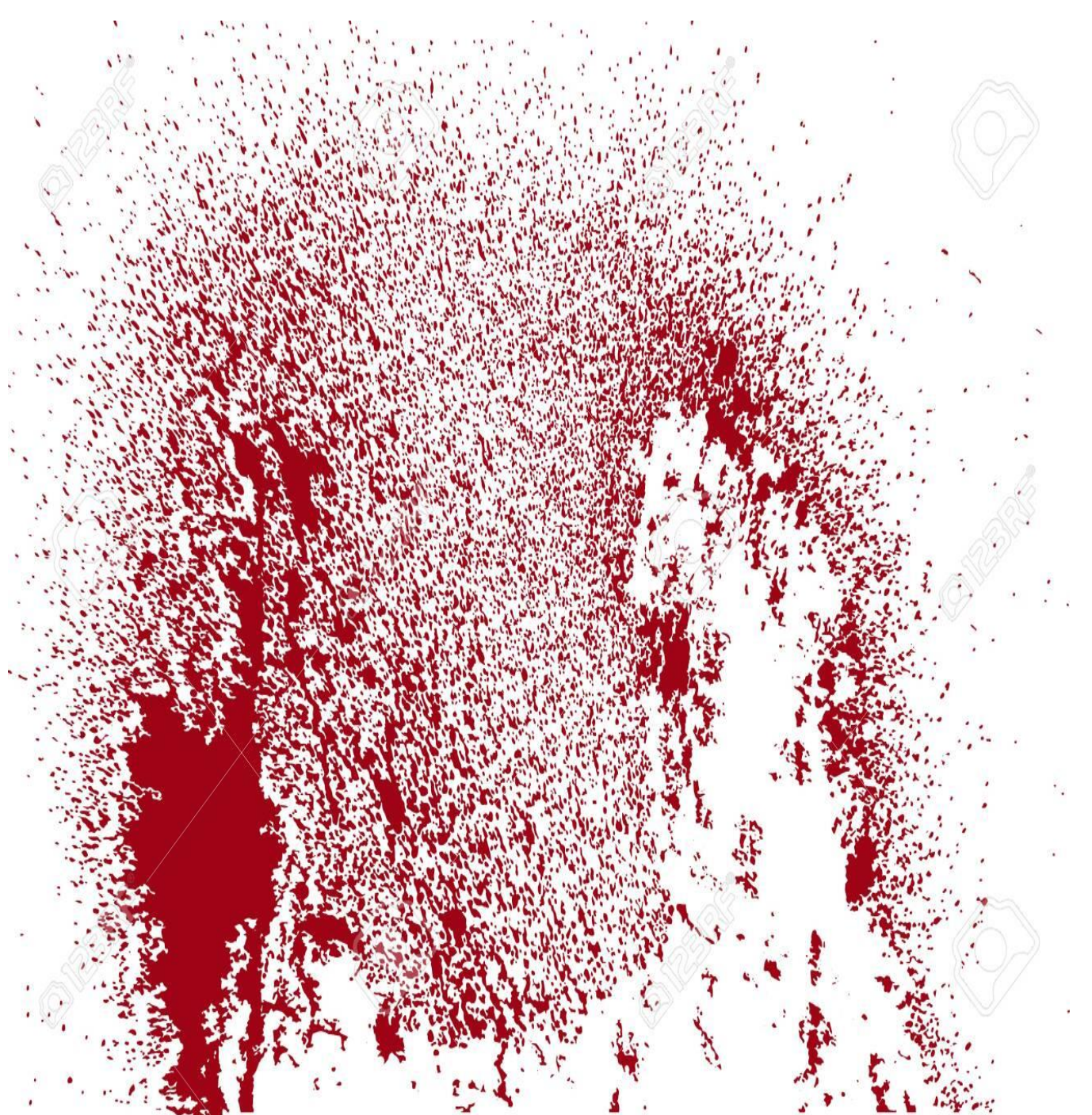


MVIS

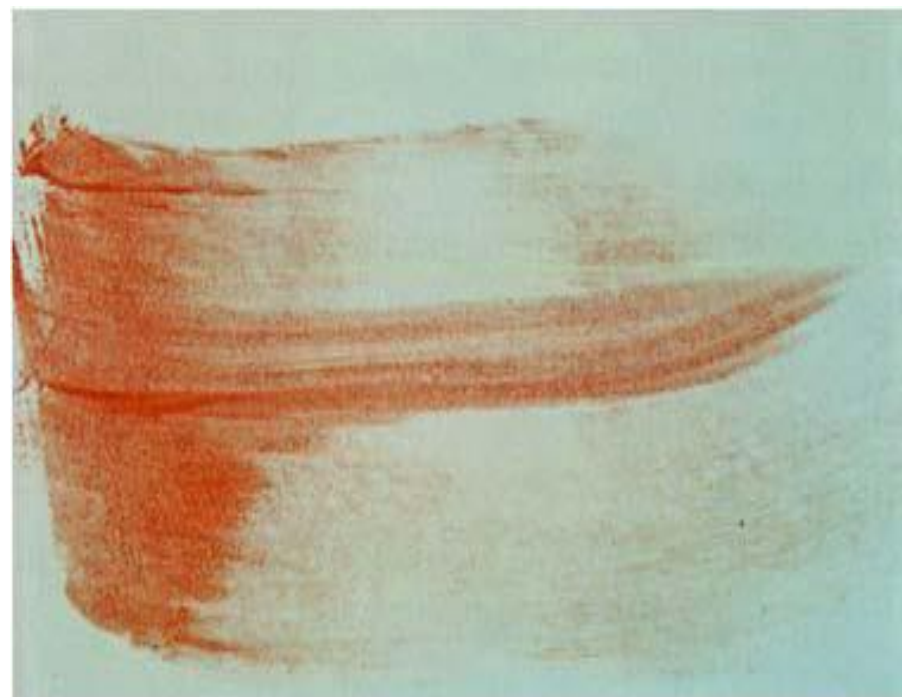
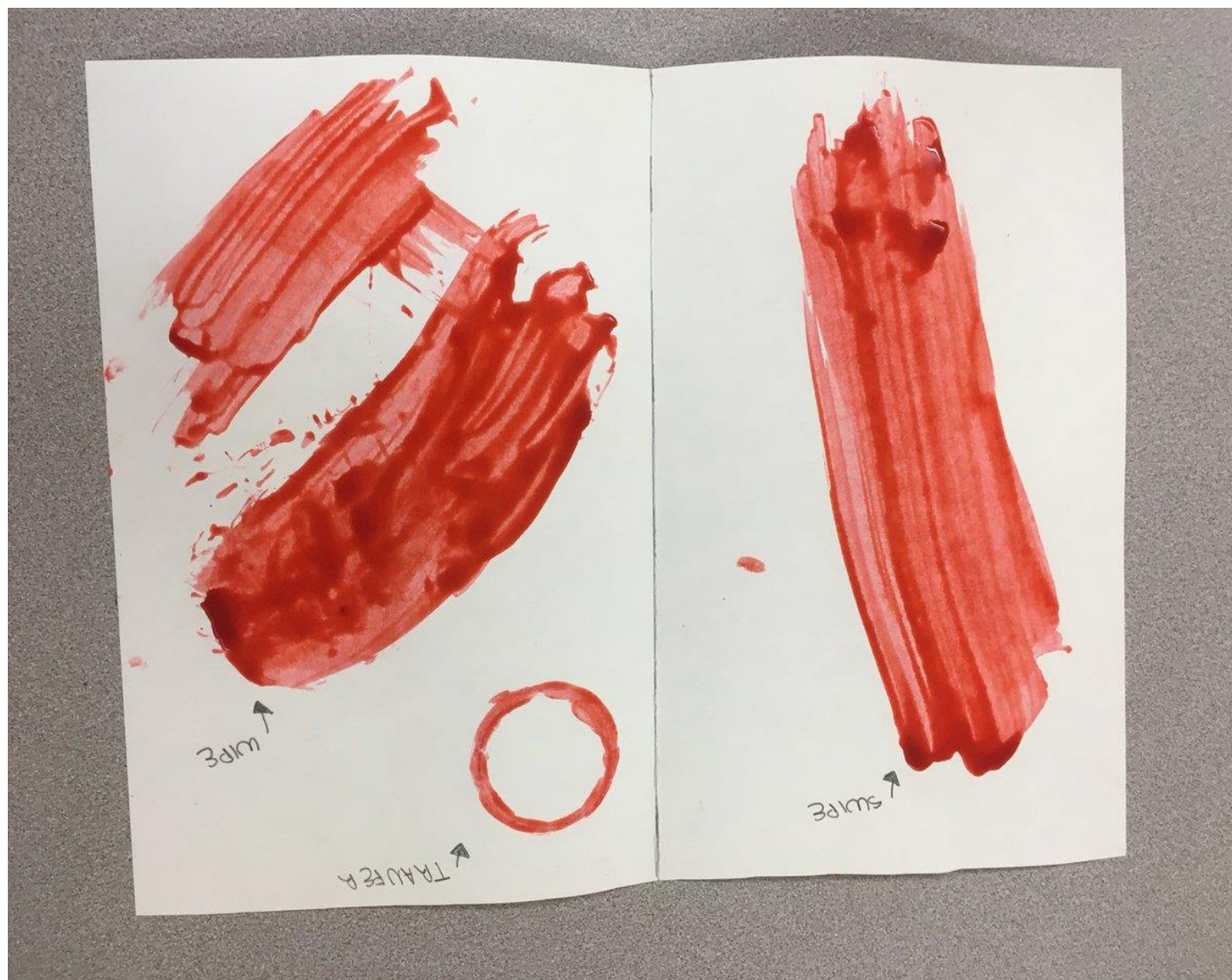
- Force is 5-25 fps
- 1-3 mm in diameter

HVIS

- Force is 100 fps
- Less than 1 mm in diameter
- With GSW- spray is mist like
- Entrance Wound- back spatter- blowback-found on weapon shooters hand
- Exit Wound- forward spatter



Swipe Pattern



Thank You!
Comments and Questions?

