

Blood

**Bloodstained floorboard
treated with luminol**

1 Is it blood?

2 Is it human blood?

3 Whose blood is it?

4 Can we use pattern of how blood
is spattered to reconstruct events?

Blood

How was the crime committed?



Look at blood distribution



Blood spatter analysis



Vietnamese man killed during the My Lai massacre

Blood Spatter



Transfer of blood



Blood Spatter Analysis

Arterial spurting



Splash of blood



Dribble down
the wall



Arterial spurting

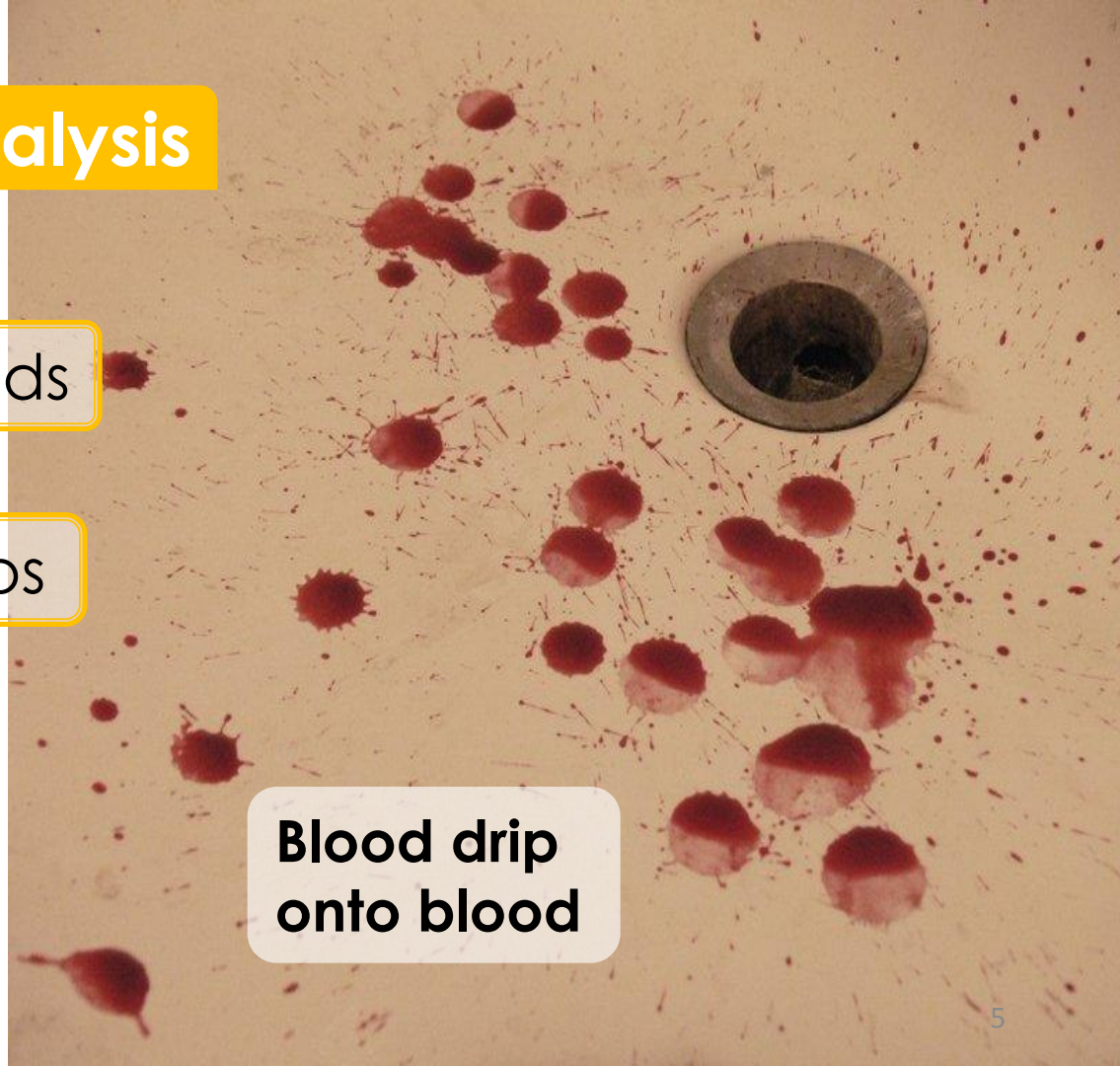
Blood Spatter Analysis

From smaller wounds



Pattern of drips

**Blood drip
onto blood**



Blood Spatter Analysis

Exact pattern of drips depend on



Surface



Length of time

**Blood drip
onto blood**



Blood Spatter Analysis

Pattern created by flying blood depends on



Violence of event

Blood Spatter Analysis

Low energy event



Low velocity spatter



1.5 m / s



Free fall



Cast off

Low velocity spatter

Blood Spatter Analysis

Relatively energetic event



Up to 30 m / s



Medium velocity
blood spatter



**Medium velocity
blood spatter**

Blood Spatter Analysis

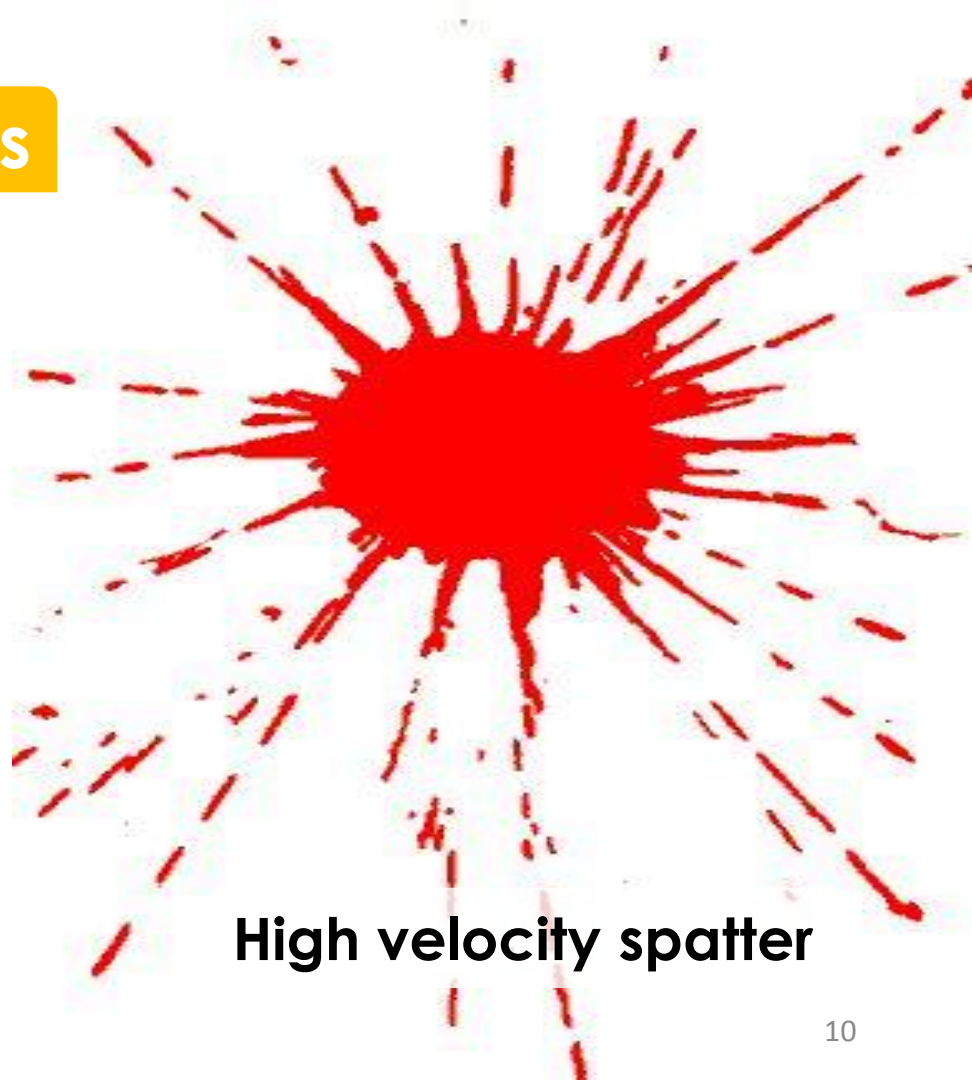
Very energetic event



Gun shots



High velocity
blood spatter



High velocity spatter

Blood Spatter Analysis

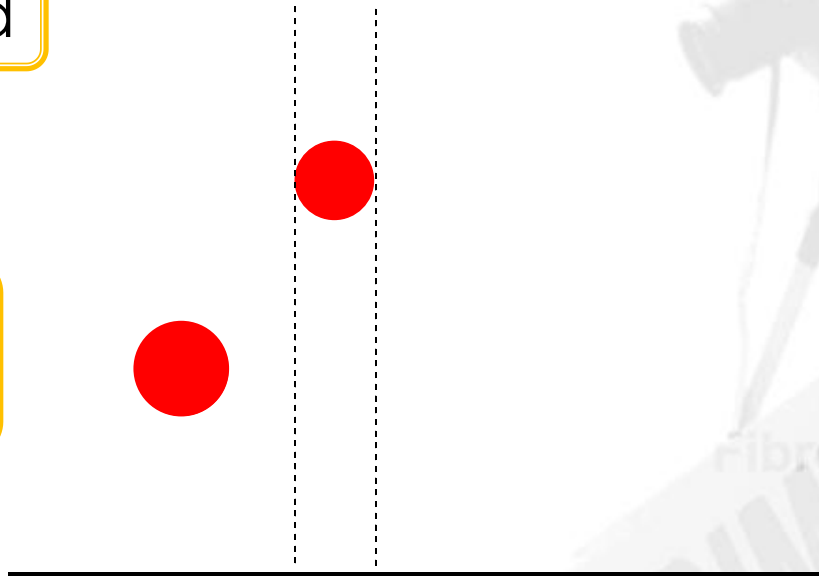
Falling drop of blood



Spherical



Circular blood spatter at 90°



Blood Spatter Analysis

Falling drop of blood



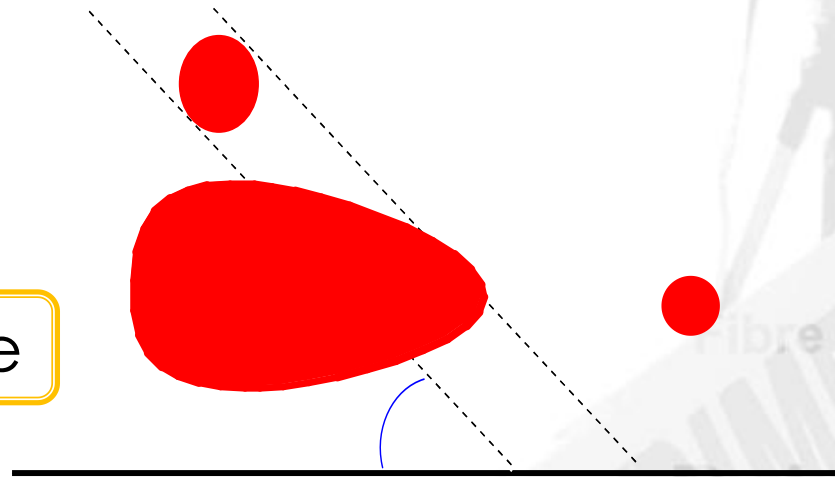
Spherical



Hit at an angle



Elongated shape



Blood Spatter Analysis

Falling drop of blood



Spherical



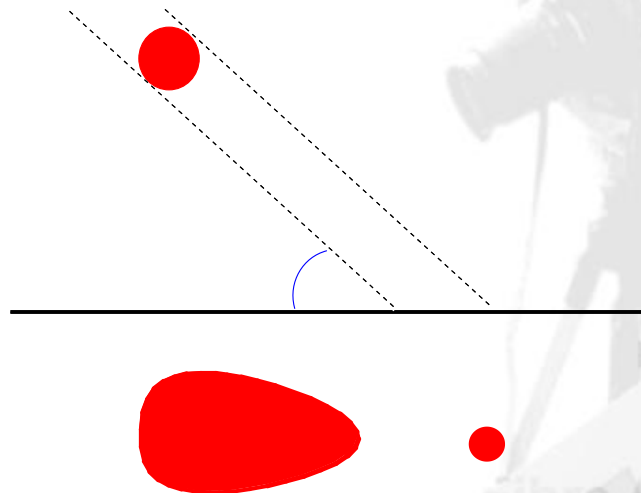
Hit at an angle



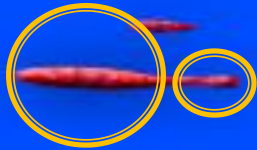
Elongated shape



Angle calculated by
comparing width and length



Blood spatter from an angle



Blood Spatter Analysis

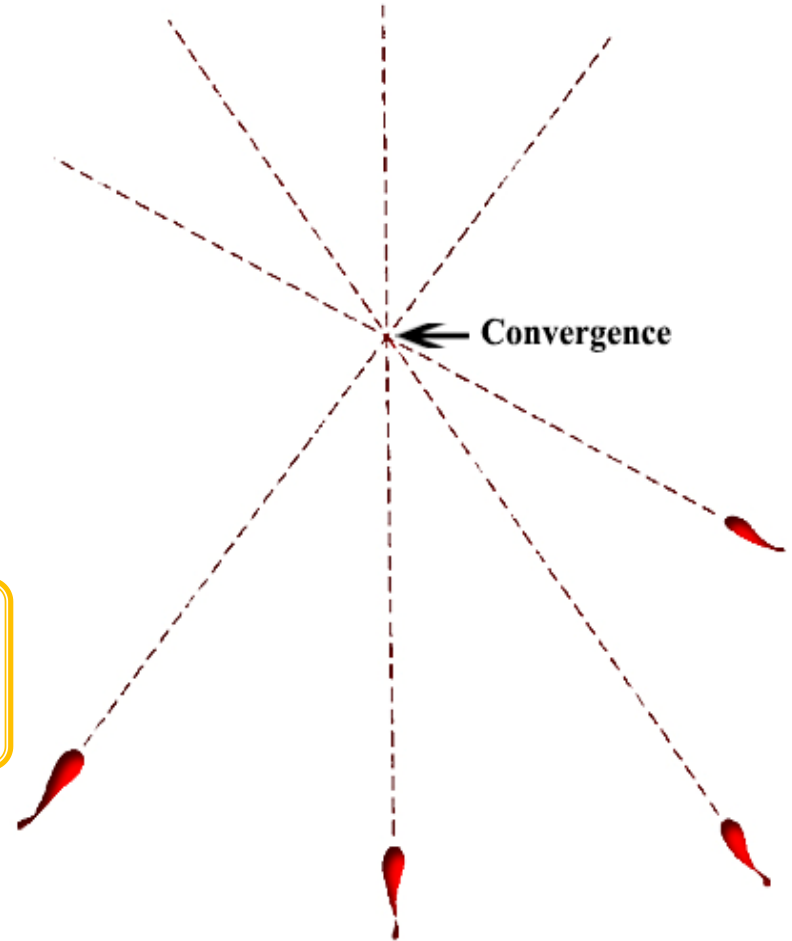
Multiple blood droplets



Plot backwards



Point of convergence
= source of blood



Blood Spatter Analysis

Three dimensional

5 feet above floor

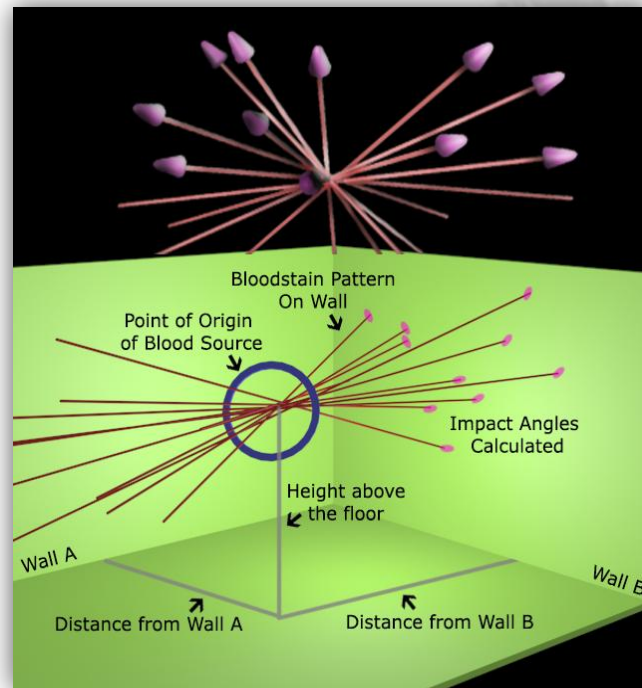


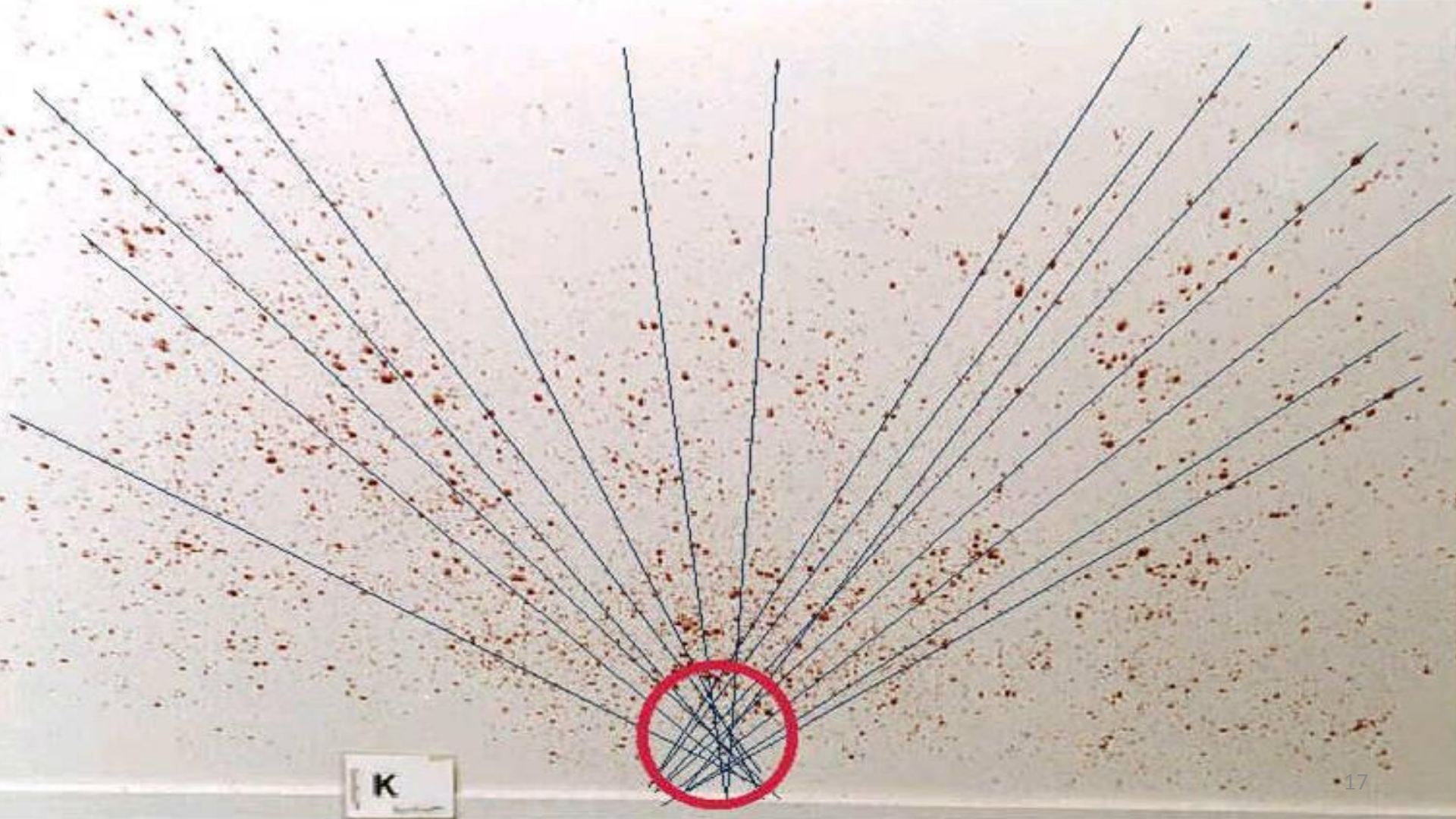
Victim was standing

Few inches above floor



Victim was on the floor





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