



Tactical Medicine: The Basics

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**“The fate of the wounded lays with those who
apply the first dressing.”**

**--Col. Nicholas Senn
1844-1908**



“Good medicine, bad places”



SWAT Development



- UT Tower, 1966
- LAPD
- Ruby Ridge
- Waco
- Modern TEMS Era





UT Tower, 1966



- **Charles Whitman**
- **Military background**
- **Multiple weapons**
 - Rifle x 2, shotgun, pistol
- **Shot victims over 500 yards away**
- **Killed by two patrolmen**





SWAT 101



- Hi-Risk Warrants
- Barricaded persons
- Dignitary protection
- Special events
- Infrastructure protection
- Counterterrorism
- DMST
- Training





Dallas SWAT



- Full-Time
- 55 Operators
- 8 Supervisors
- 2 Commanders

- TESS
 - 4 Officers/1 Supervisor
- Support personnel





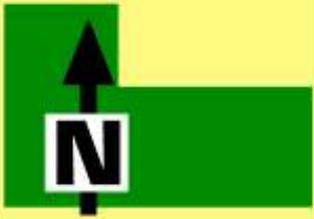
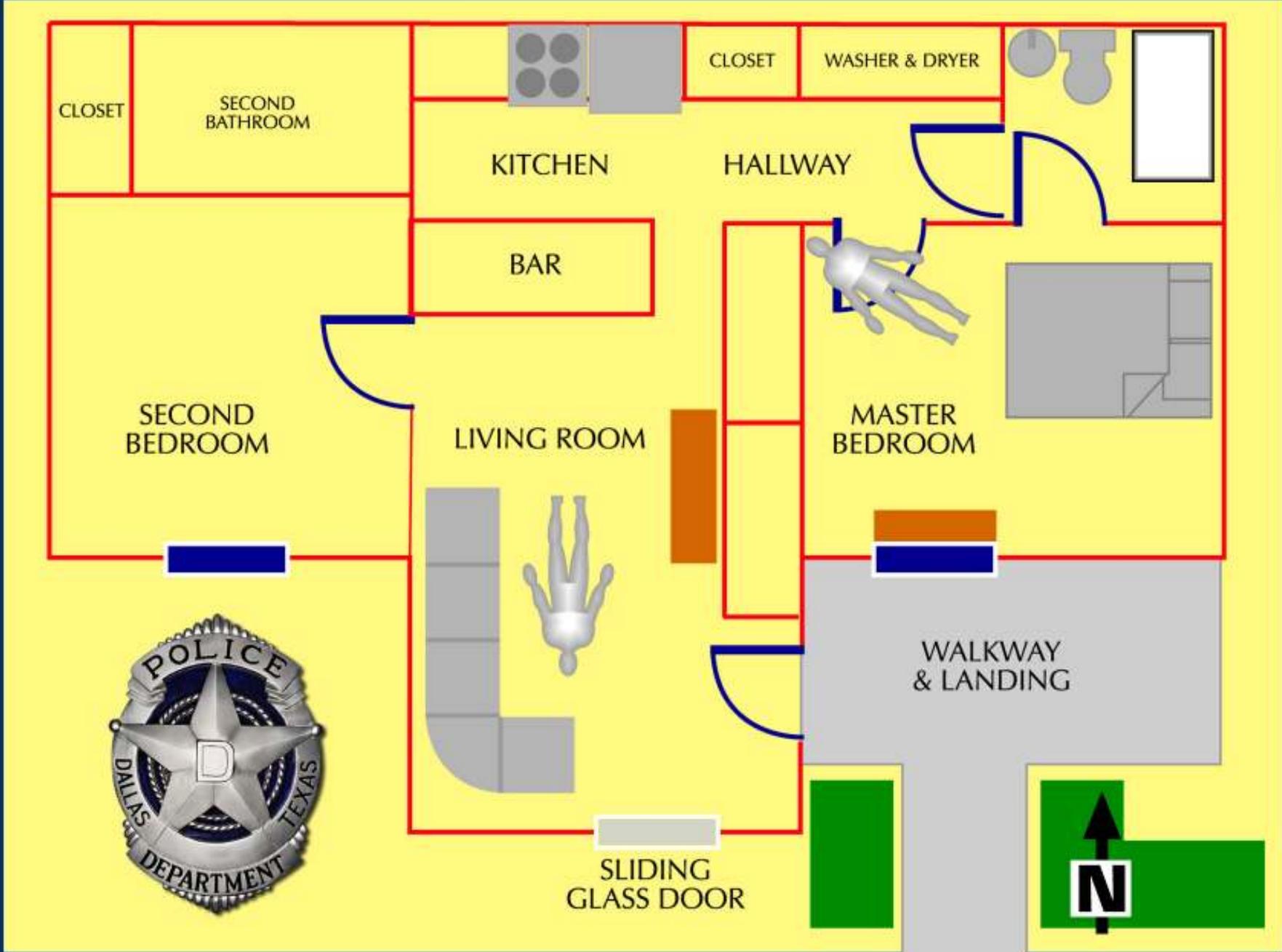
Modern Active Shooters

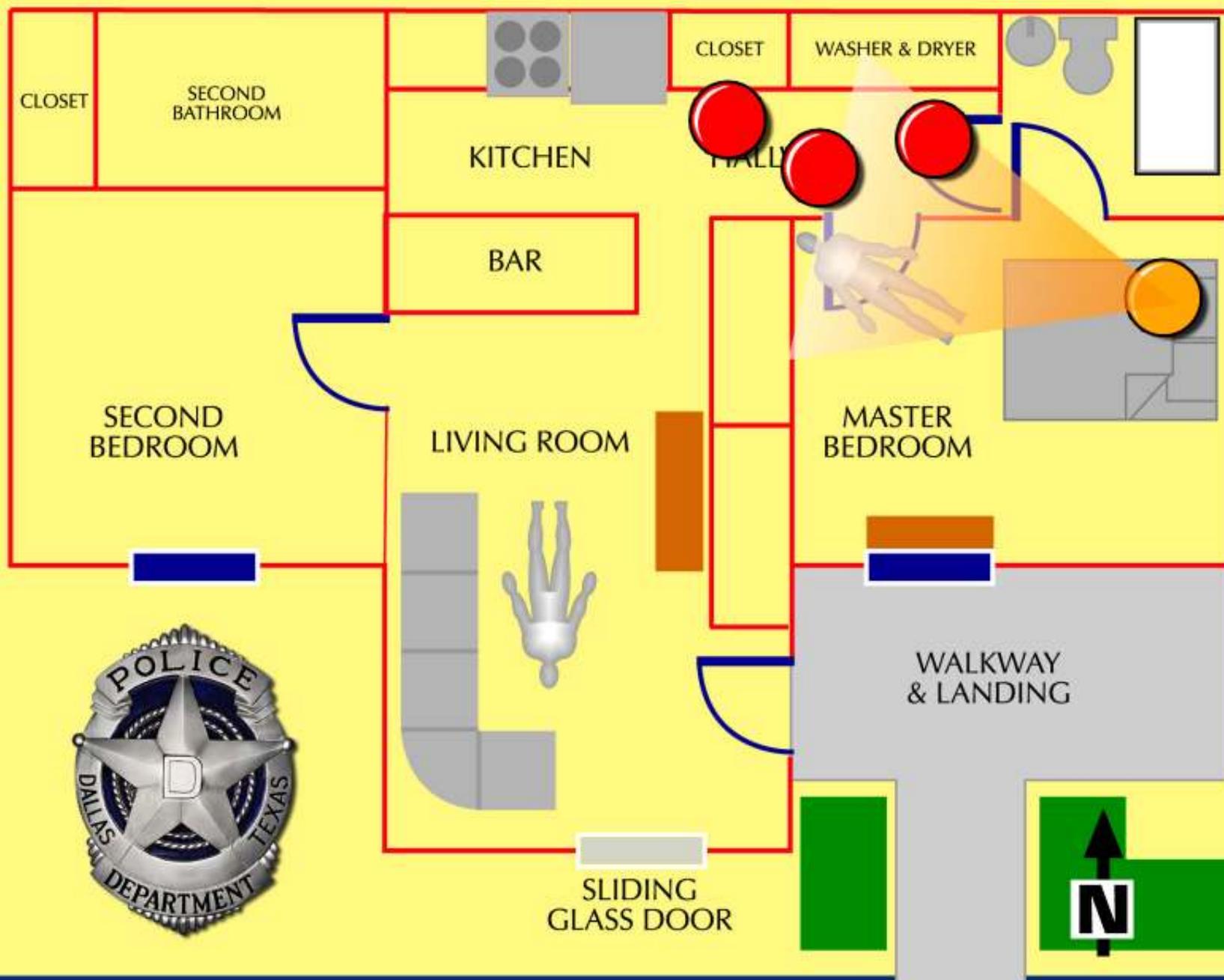


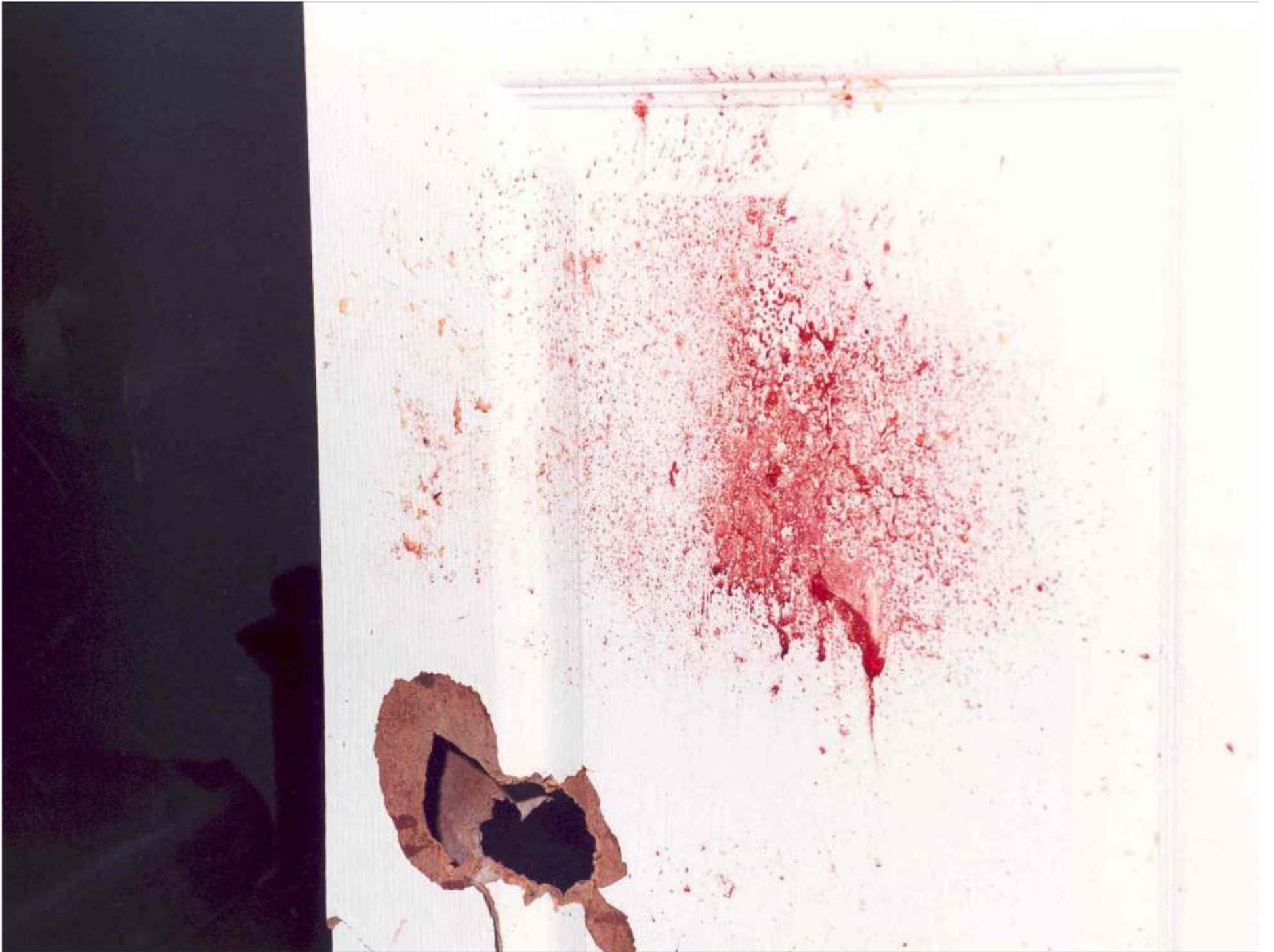
- **LAPD North Hollywood**
 - Feb 28, 1997
 - 2 Killed, 14 Wounded
- **Columbine HS**
 - April 20, 1999
 - 14 Killed, 24 Wounded
- **Virginia Tech**
 - April 16, 2007
 - 32 Killed, 29+ Wounded













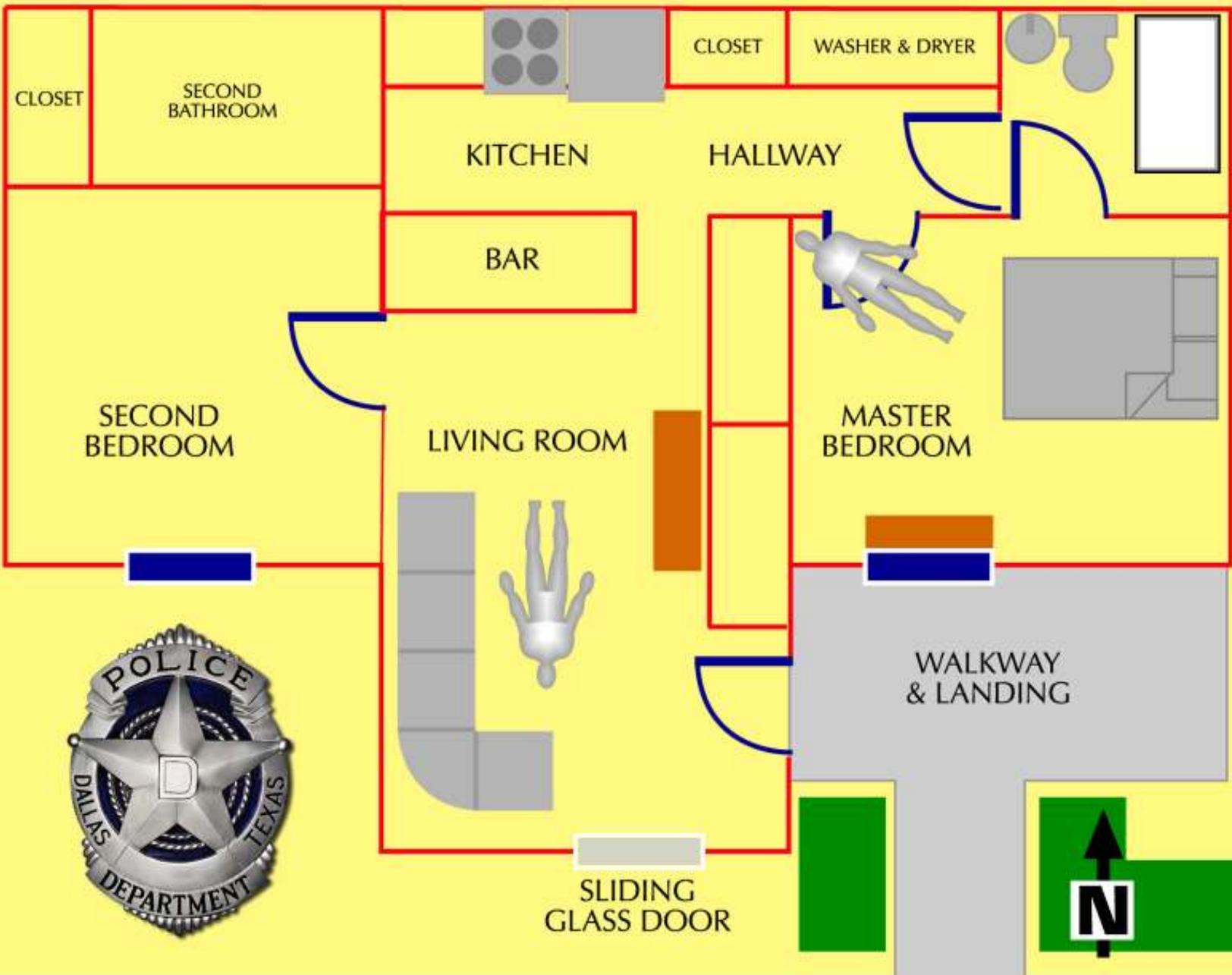


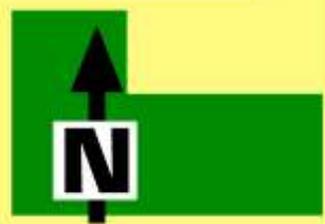
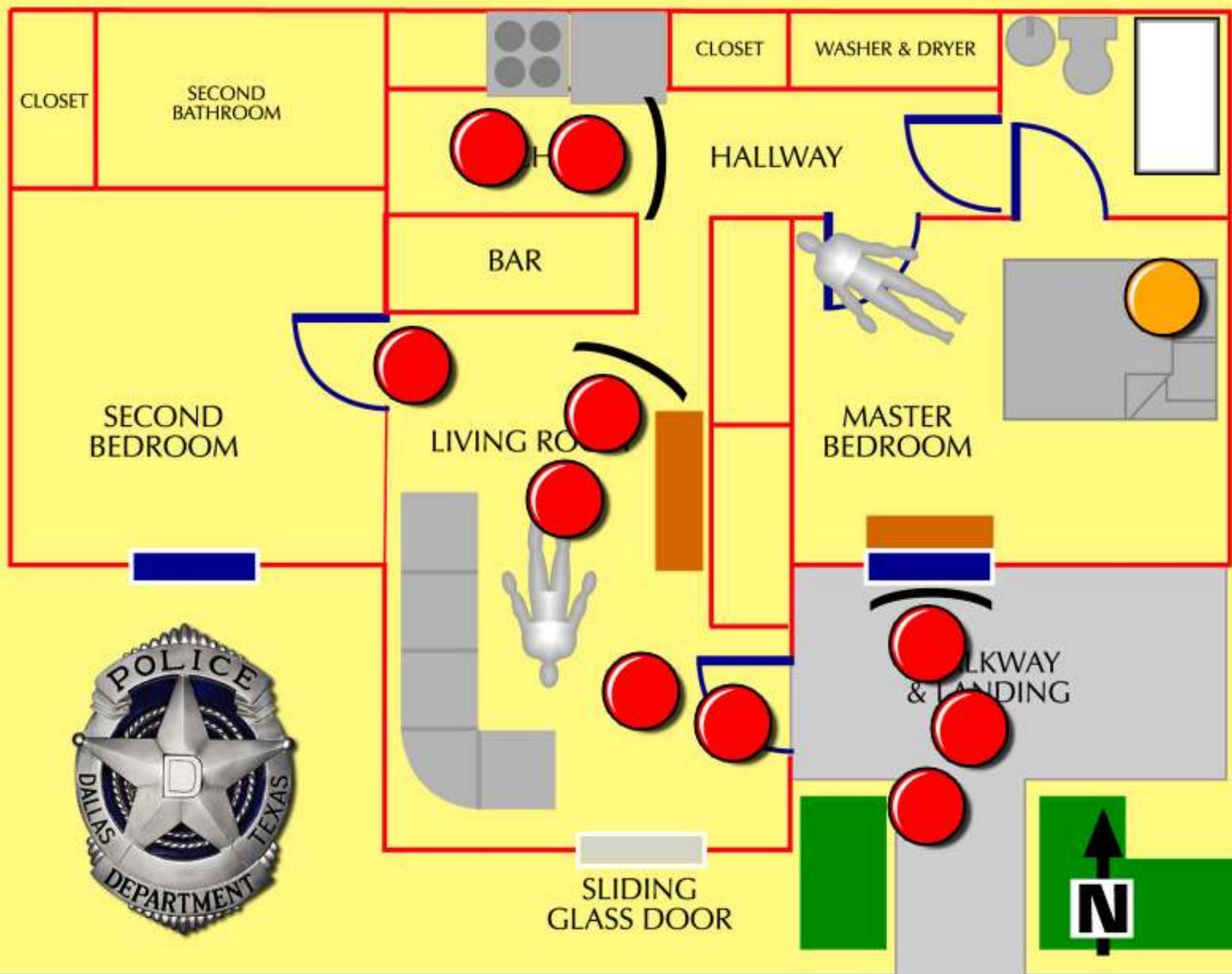
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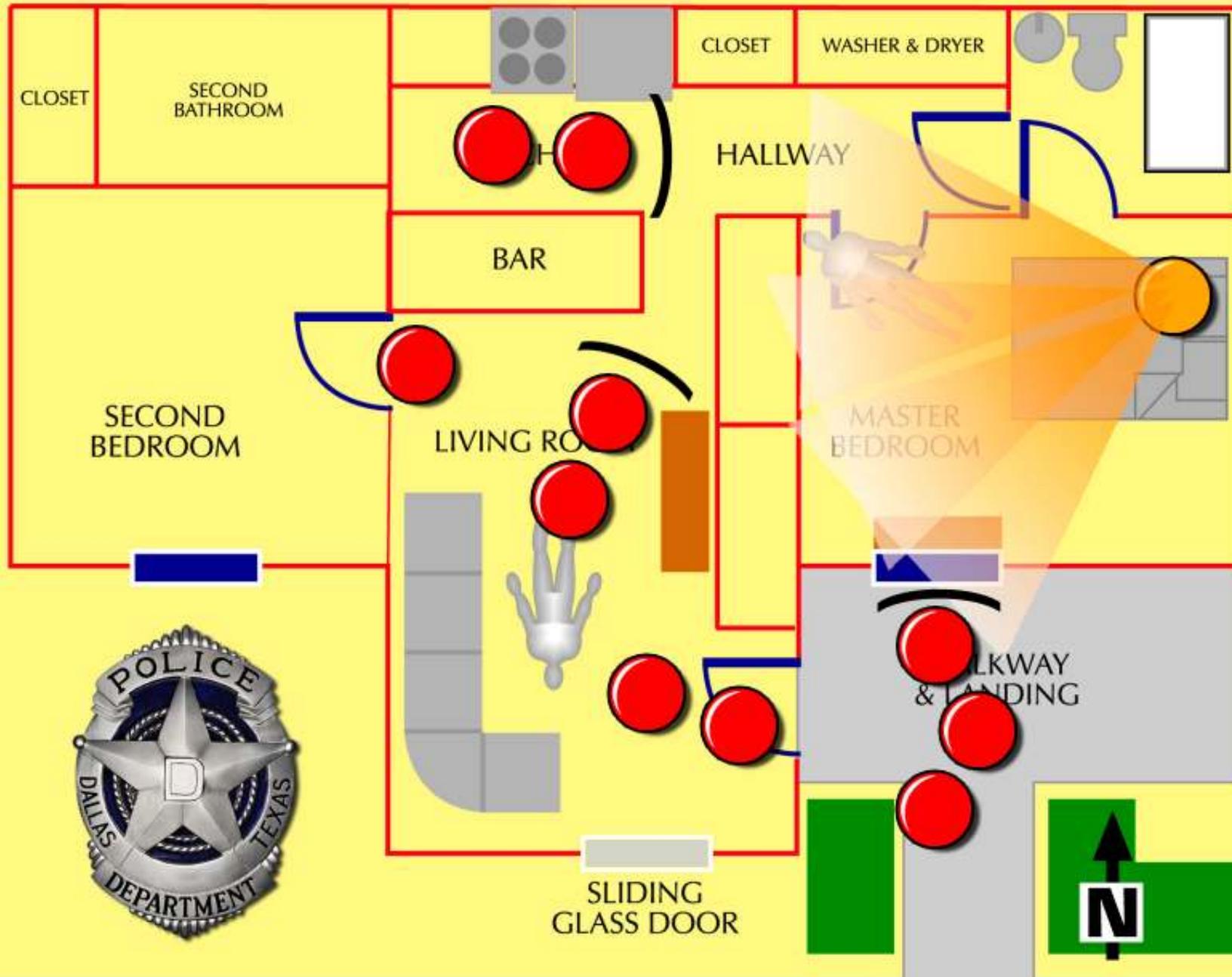
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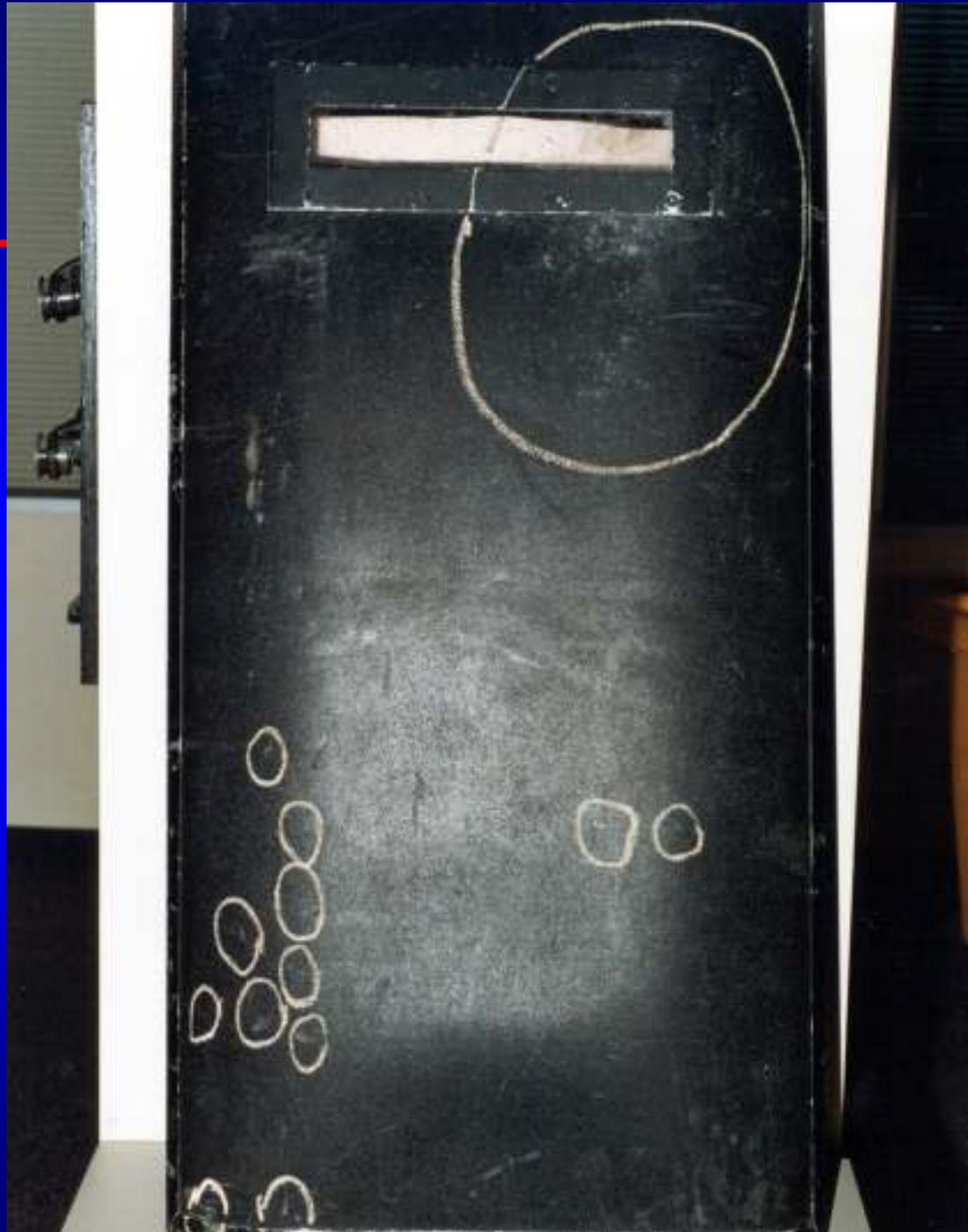










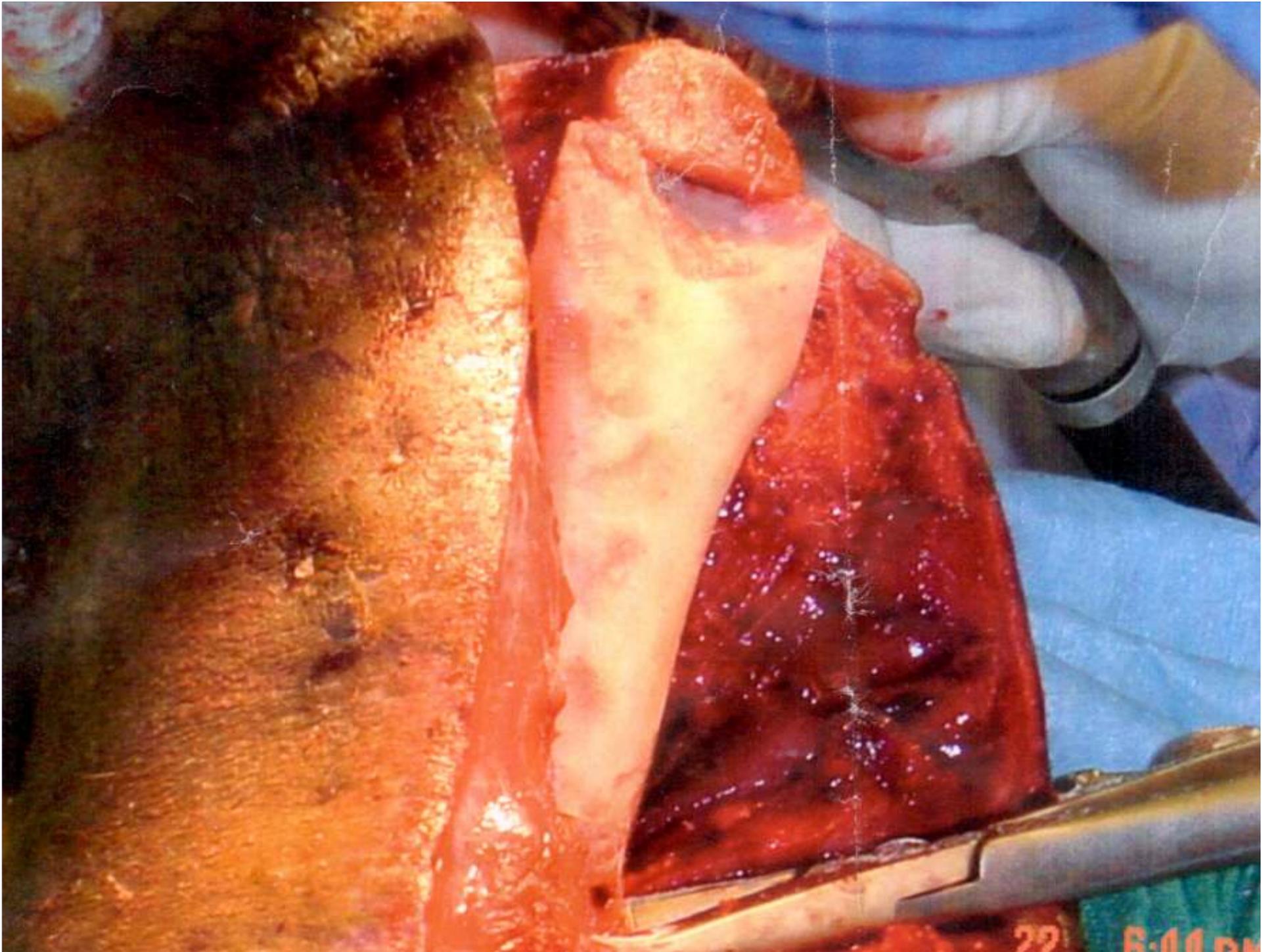


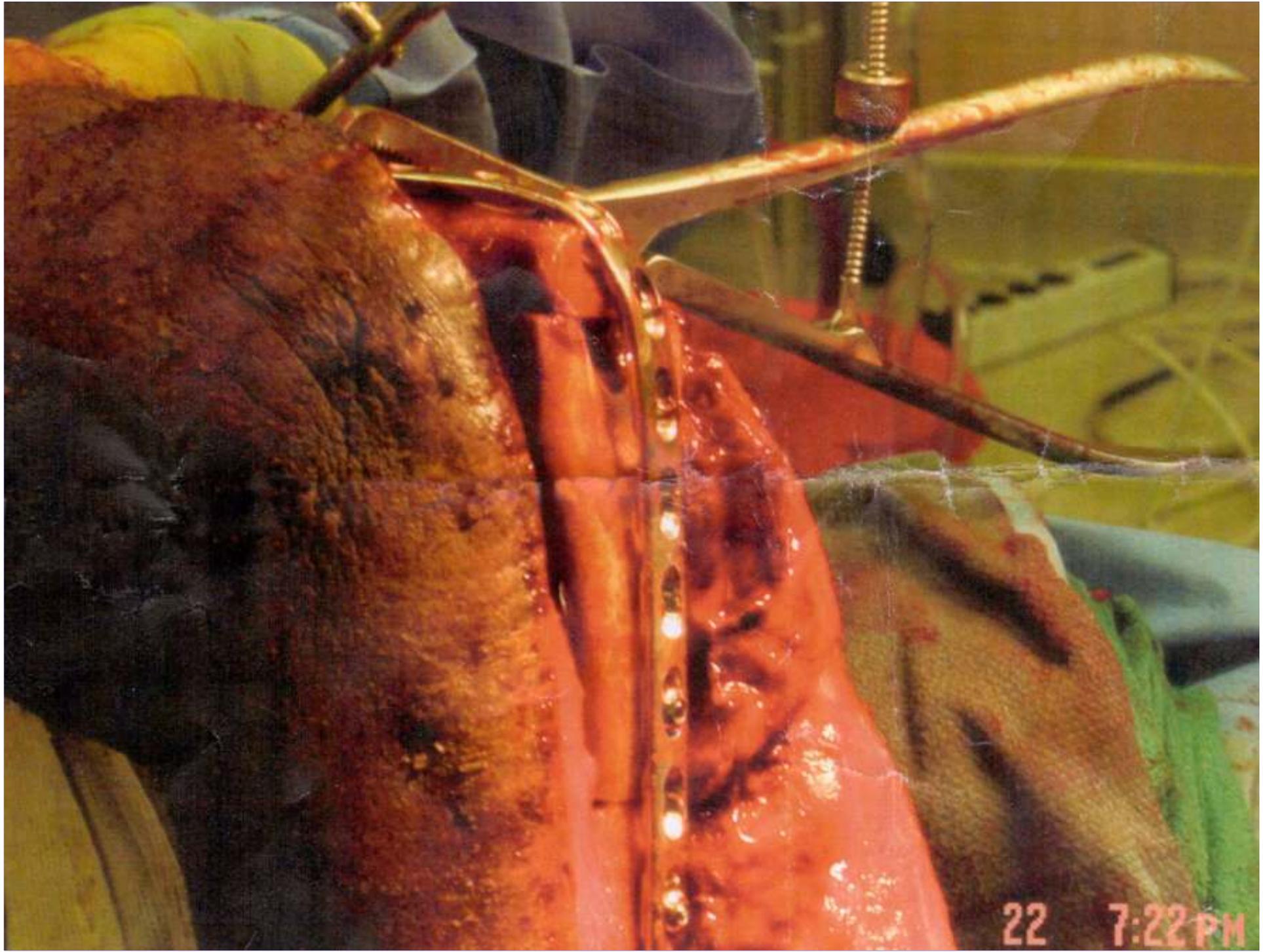




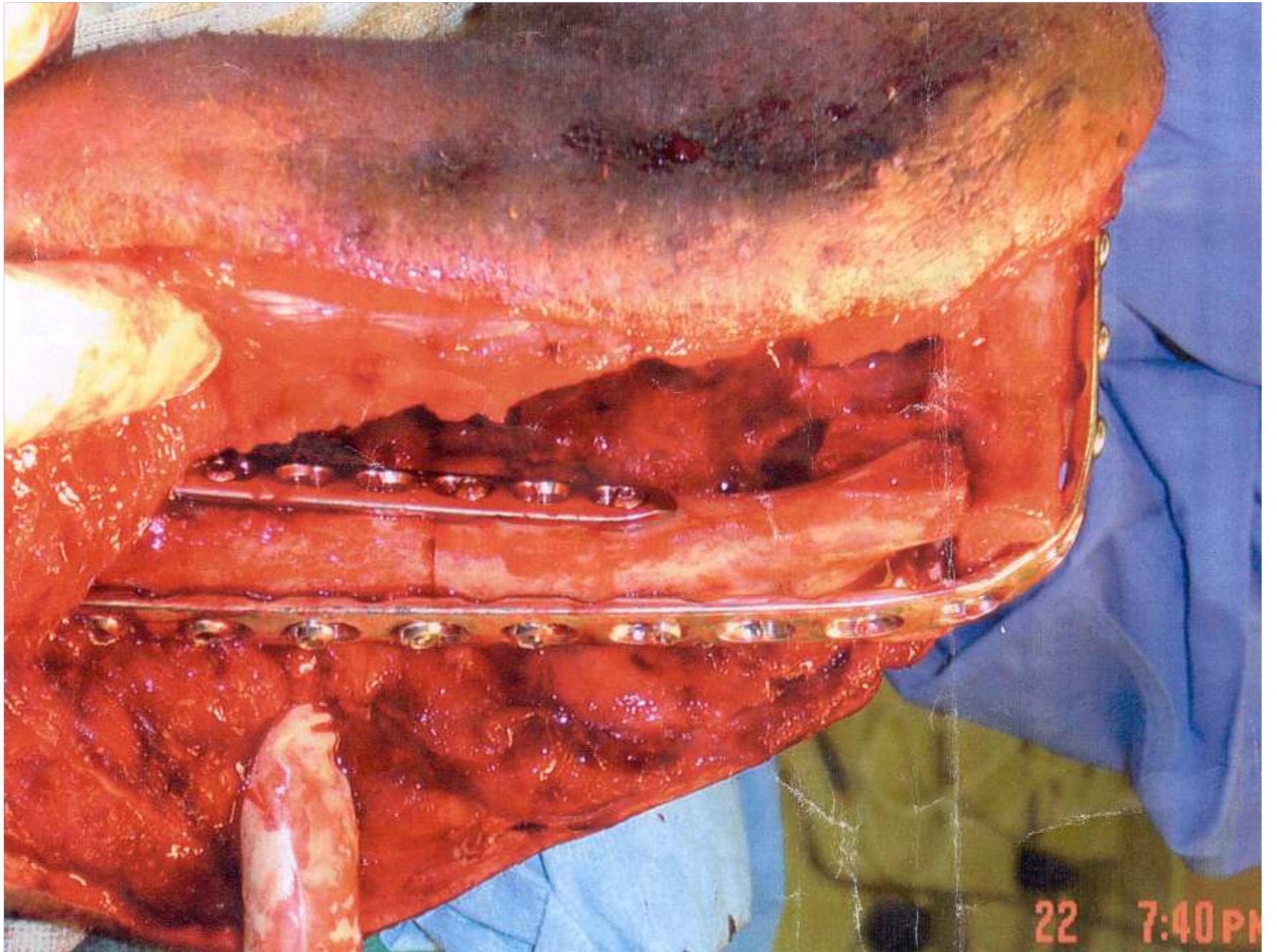








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Duncanville Road

Injuries

- **GSW Femoral artery**
 - Shock
- **GSW UE**
- **GSW Elbow**
 - Shock

Immediate Treatment

- **None**
- **None**
- **None**



DPD Medicine

- **City of Dallas TMST**
- **September 11, 2004**
- **Continuous development**
- **All hazards coverage**





Dallas SWAT—TEMS



- 2 Physicians
- UTSW
- Parkland Hospital
- Dallas County
- City of Dallas





Dallas SWAT TEMS Principles



- Eliminate golden hour
- Trauma center to the injured officer
- “Good Medicine, Bad Places”





TEMS

Zones of Care



- **HOT** zone = receiving effective fire / move to cover / LIMITED care given.
- **WARM** zone = behind cover / provide initial life-saving care / plan for extraction.
- **COLD** zone = NOT under fire / provide additional care / meet with transport.





TEMS

Altered Priorities

X eXtreme
bleeding



A Airway

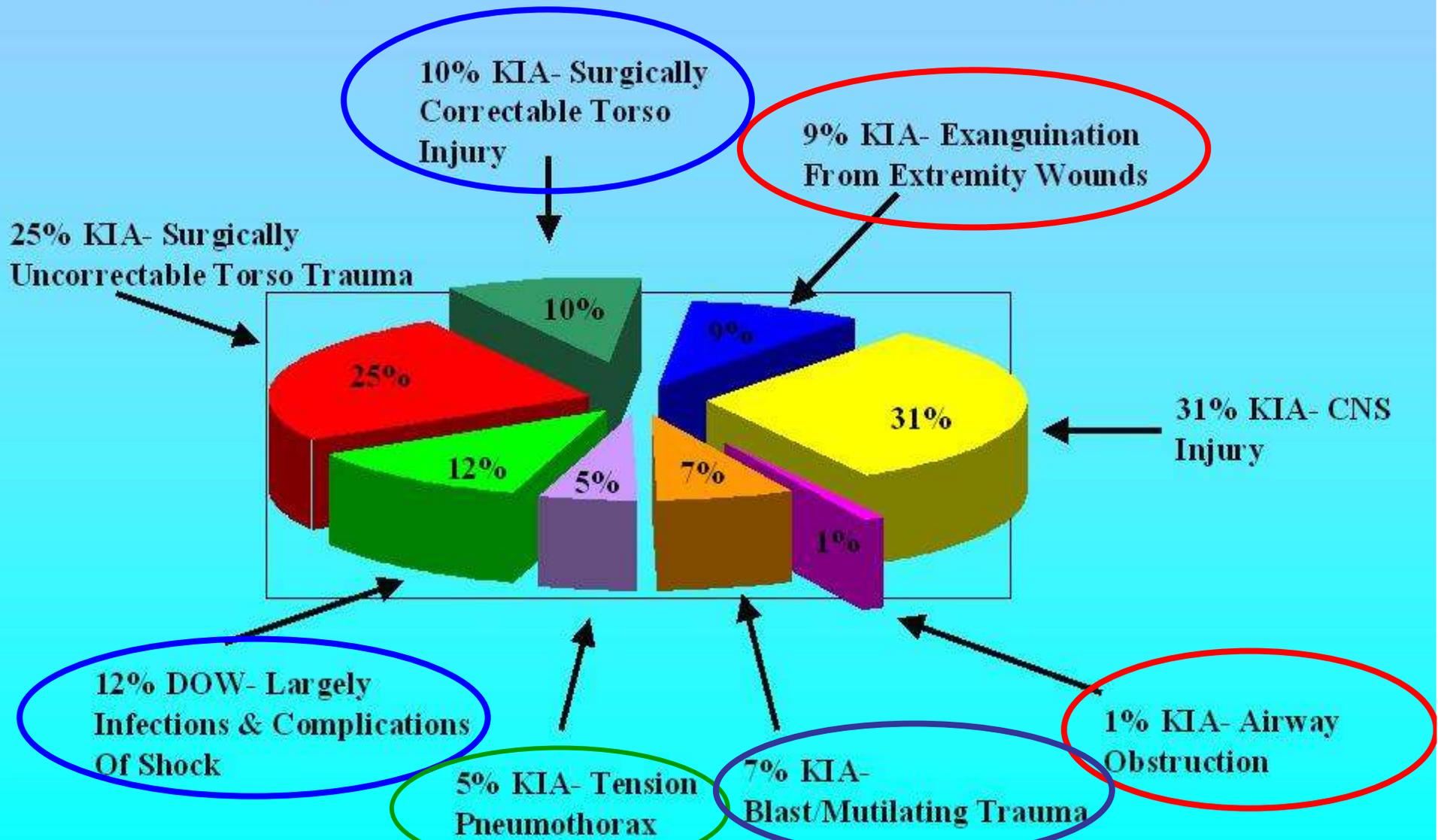


B Breathing



C Circulation

How People Die In Ground Combat (From COL Ron Bellamy)





Dallas SWAT

Self-Aid/Partner-Aid Training

- Hemorrhage control
- Basic airway
- Tension PTX

- Use victim's equipment
- Stay in fight



Dallas SWAT

Standard Officer Medical Kit

- Tourniquet
- 14ga Needle
- Modular Bandage
- Nasal airway
- Trauma Shears
- Latex gloves (nonpowdered)



Hollywood Ave



- **IRS/ATF**
- **Early AM**
- **Prior contact**

- **Shots fired late**
- **Officer down**





Hollywood Ave







SOUTHWESTERN
THE UNIVERSITY OF TEXAS



Hollywood Ave



Injuries

- **GSW Neck**
 - Hypopharyngeal lac
 - C5/6/7 Vert Canal Fx
 - VAI
 - Unconscious
 - Apneic

Immediate Treatment

- **Cric**
- **IVF**
- **Evacuate**



Future Directions



- **Improved training**
- **Incorporating lessons from military conflict**
- **Research**



Improved Training





Improved Training





Incorporating Military Medical Lessons



- **Increased use of tourniquets**
- **Hemostatic agents**
- **Change in resuscitation paradigm**



Ongoing Research

- **TASER**
 - Presented and submitted
- **Officer Fatalities**
 - ME Study
- **Less-Lethal Weapon Multicenter Trial**
 - IRB



Thanks



- **Chief David Kunkle (ret.)**
- **Lt. Robert Owens**
- **Dr. Paul Pepe**

- **Dr. Rege**
- **Dr. Valentine**

- **Dr. Minei**