

# EXTENDED CURETTAGE TIPS & TRICKS

**DR RAJAT GUPTA**  
ORTHOPAEDIC ONCOLOGIST

**BONE**  
CANCER CLINIC  
**CHANDIGARH**



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➤ POOR CASE SELECTION ?

➤ POOR TECHNIQUE ?



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# EXTENDED CURETTAGE



## ➤ WHEN ?

- Adequate disease clearance is possible
- Good residual bone can be saved

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# EXTENDED CURETTAGE



**RISK OF  
LOCAL  
RECURRENCE**

**FUNCTION**

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# EXTENDED CURETTAGE



- ADEQUATE EXPOSURE
- CURRETING & BURRING
- ADJUVANTS
- RECONSTRUCTION

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# EXTENDED CURETTAGE

ADEQUATE EXPOSURE



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# EXTENDED CURETTAGE

ADEQUATE EXPOSURE





# EXTENDED CURETTAGE

## ADEQUATE EXPOSURE



- ✓ As atraumatic as possible
- ✓ Isolate with  $H_2O_2$  mops
- ✓ Enbloc removal of soft tissue component
- ✓ Cautery

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- ✓ Isolate with  $H_2O_2$  mops
- ✓ Enbloc removal of soft tissue component
- ✓ Caution

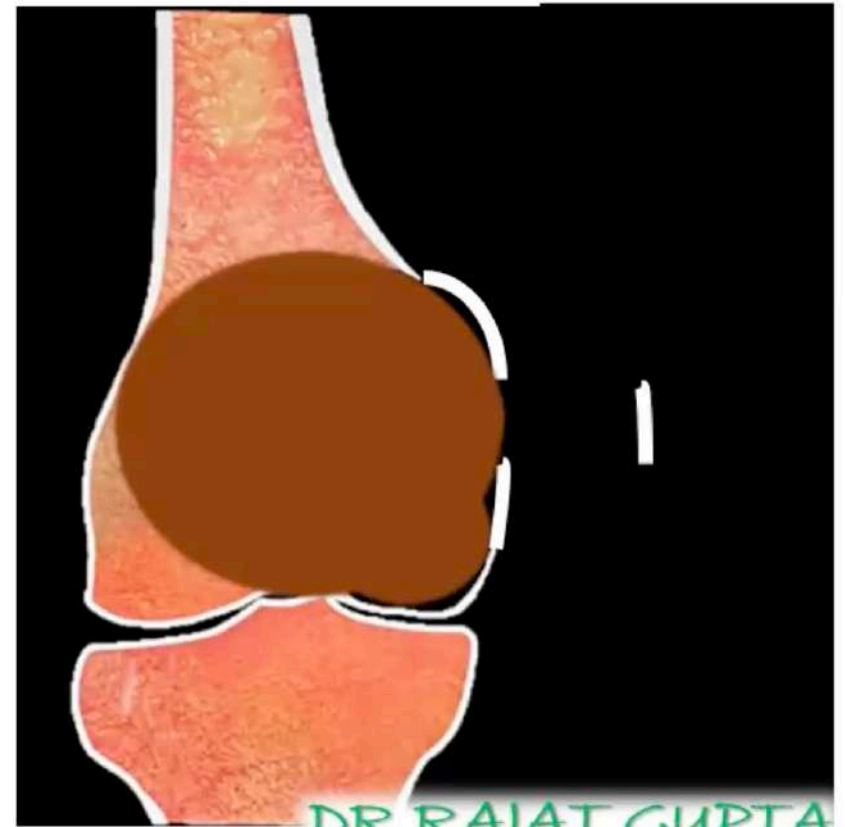
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# EXTENDED CURETTAGE

ADEQUATE EXPOSURE

# EXTENDED CURETTAGE

✓ Large window



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# EXTENDED CURETTAGE



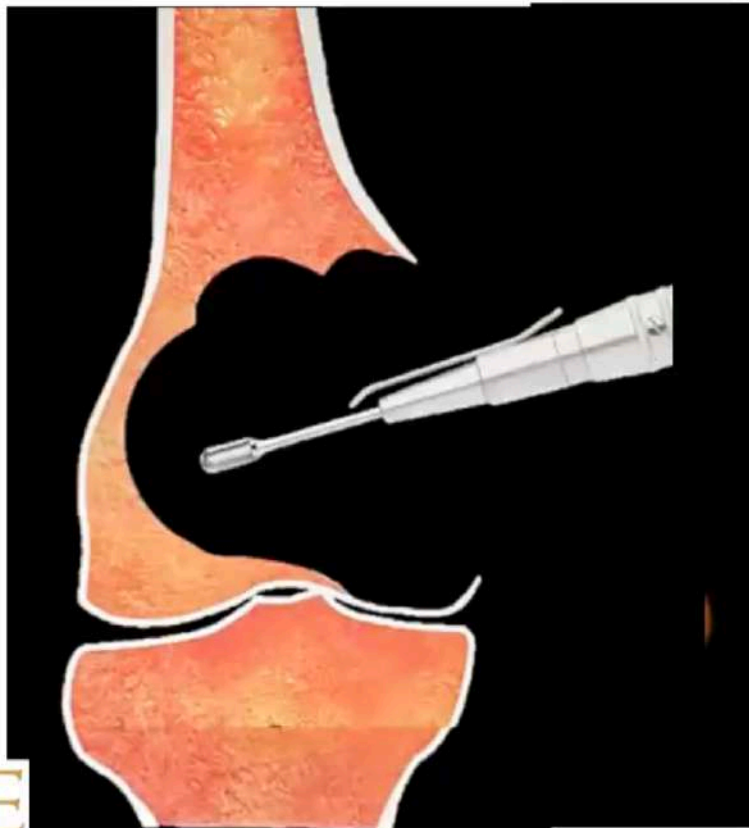
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# EXTENDED CURETTAGE



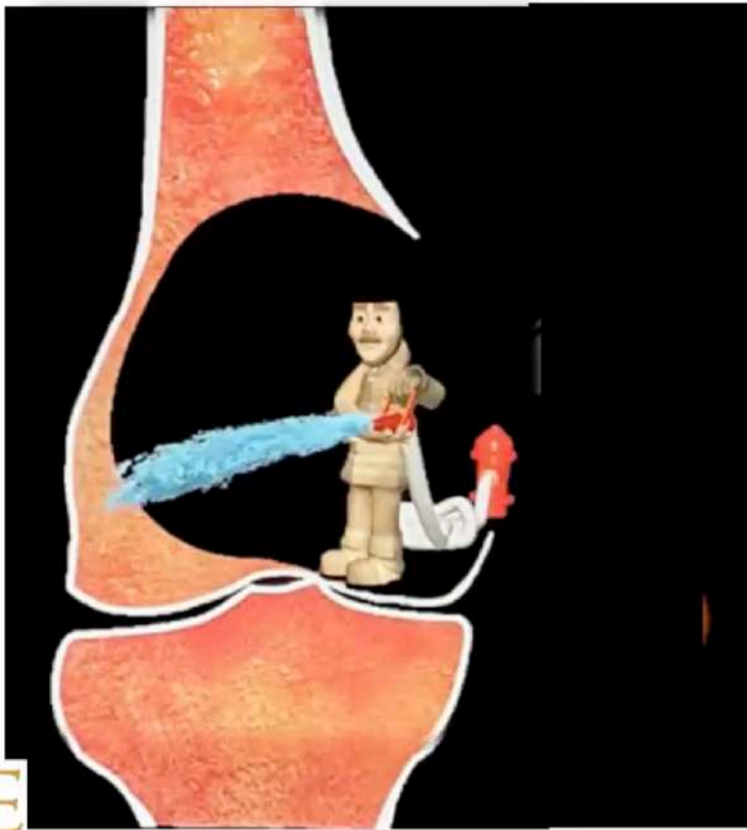
✓ Large window

✓ Curetting

✓ High Speed Burring

**BURRING IS NOT  
ADJUVANT**  
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# EXTENDED CURETTAGE



✓ Large window

✓ Curetting

✓ High Speed Burring

✓ Pulsed Lavage

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# VISUALISATION UNDER C - ARM

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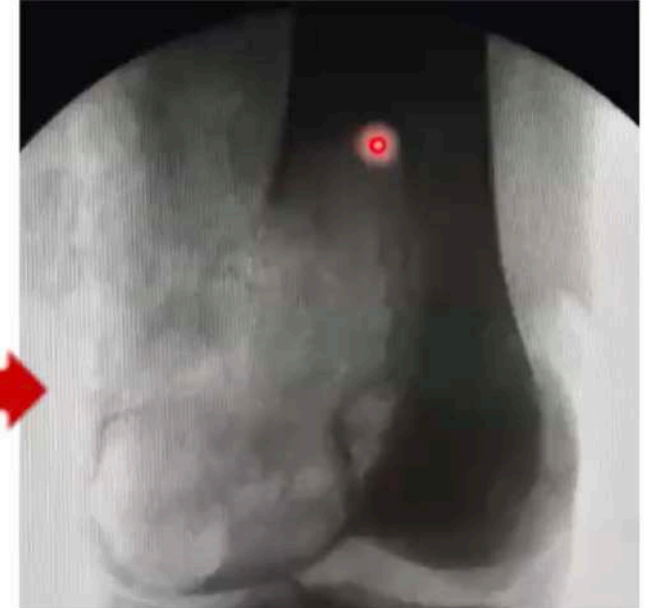
# EXTENDED CURETTAGE



**BEFORE  
INCISION**



**AFTER  
CURETTING**



**AFTER  
BURRING**

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# EXTENDED CURETTAGE

≈ LIQUID NITROGEN

- Maximum penetration 14mm
- Fractures
- Nerve injury

≈ PHENOL

- Penetration <1mm

≈ ARGON BEAM

- Penetration 4mm

≈ HYDROGEN PEROXIDE

- Kills tumour cells by direct contact

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*Sarcoma*. 2010;2010. pii: 586090. doi: 10.1155/2010/586090. Epub 2010 Jul 27.

## High-Speed Burring with and without the Use of Surgical Adjuvants in the Intralesional Management of Giant Cell Tumor of Bone: A Systematic Review and Meta-Analysis.

Algawahmed H<sup>1</sup>, Turcotte R, Farrokhyar F, Ghert M.

### + Author information

#### Abstract

Local control rates for Giant Cell Tumor of Bone (GCT) have been reported in a large number of retrospective series. However, there remains a lack of consensus with respect to the need for a surgical adjuvant when intralesional curettage is performed. We have systematically reviewed the literature and identified six studies in which two groups from the same patient cohort were treated with intralesional curettage and high-speed burring with or without a chemical or thermal adjuvant. Studies were evaluated for quality and pooled data was analyzed using the fixed effects model. Data from 387 patients did not indicate improved local control with the use of surgical adjuvants. Given the available data, we conclude that surgical adjuvants are not required when meticulous tumor removal is performed.

# EXTENDED CURETTAGE

SIMILAR LOCAL CONTROL RATES

NOT AN ALTERNATIVE TO GOOD BURRING



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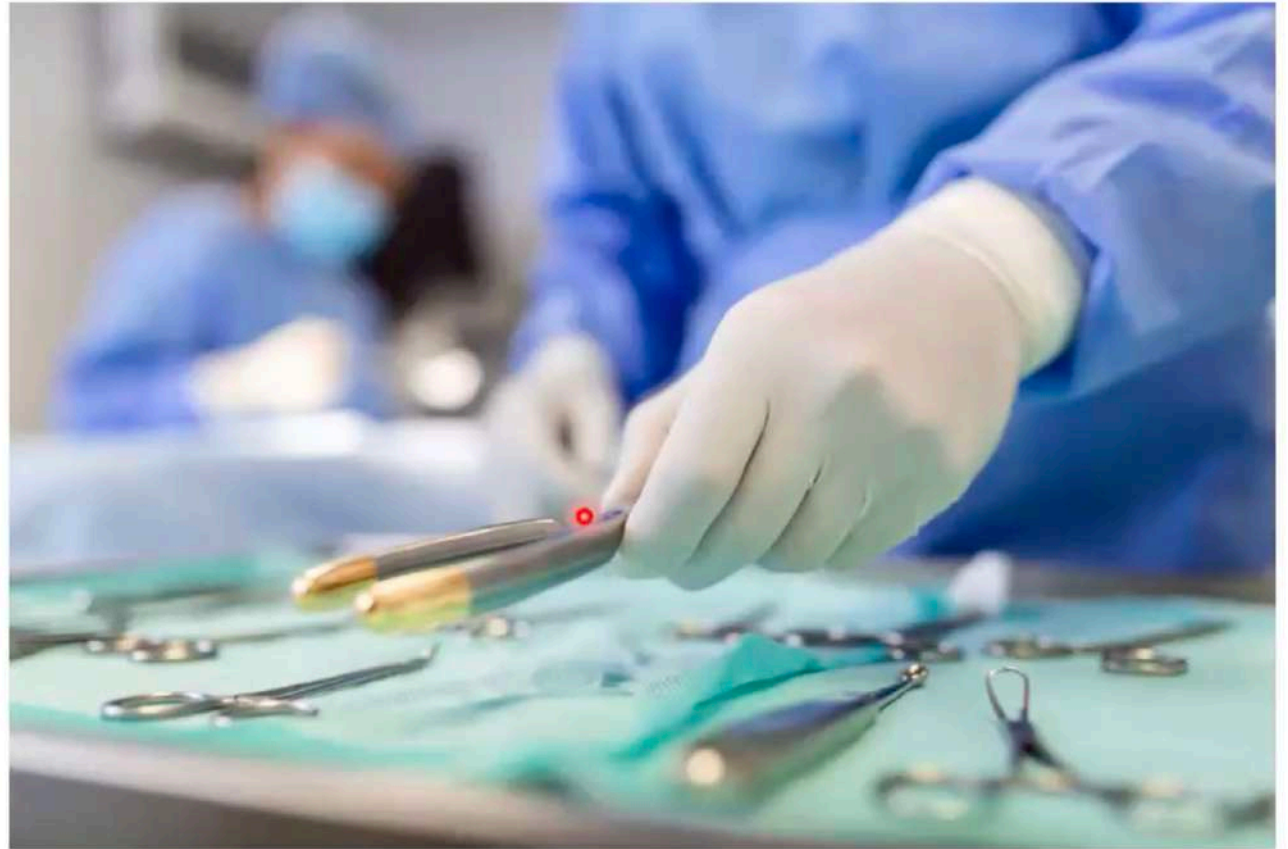
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# EXTENDED CURETTAGE

**CHANGE  
DRAPES ,  
GLOVES  
&  
INSTRUMENTS**

**Harvest bone graft  
prior to curettage  
(if possible)**





TECHNICAL NOTE

# Iatrogenic implantation of giant cell tumor at bone graft donor site and clinical recommendations to prevent “A Rare Avoidable Complication”

Ashish Gulia · Ajay Puri · Abhijeet Salunke ·  
Subhash Desai · N. A. Jambhekar

## Iatrogenic giant cell tumor at bone graft harvesting site

Zile S Kundu, Vinay Gupta, Sukhbir S Sangwan, Shobit Goel, Parveen Rana<sup>1</sup>

### ABSTRACT

30 year old female patient with giant cell tumor of the distal tibia initially treated with autologous bone grafting from the ipsilateral iliac crest reported to us with local recurrence at the bone graft harvesting site which required extensive surgeries at both sites. The risk factors for this complication include inadequate surgical planning or poor surgical techniques, and the steps to prevent it.

### CASE REPORT

## Iatrogenic Seeding of a Giant Cell Tumor of the Patella to the Proximal Tibia

Onder Ofluoglu, MD<sup>\*</sup>; and Rakesh Donthineni, MD, MBA<sup>†</sup>

CLINICAL ORTHOPAEDICS AND RELATED RESEARCH  
Number 465, pp. 260–264  
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# VIDEO DEMONSTRATION



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# 28Y/M GCT DISTAL FEMUR

19-09  
Superb MRI and CT Scan  
knee  
pd\_tse\_fs\_

Superb MRI and CT Scan

knee  
pd\_tse\_fs\_tr

522 WW: 1133 [D] p TR: 4080.0 TE  
Superb MRI and CT Scan

kr  
t1\_t



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**INCISION**

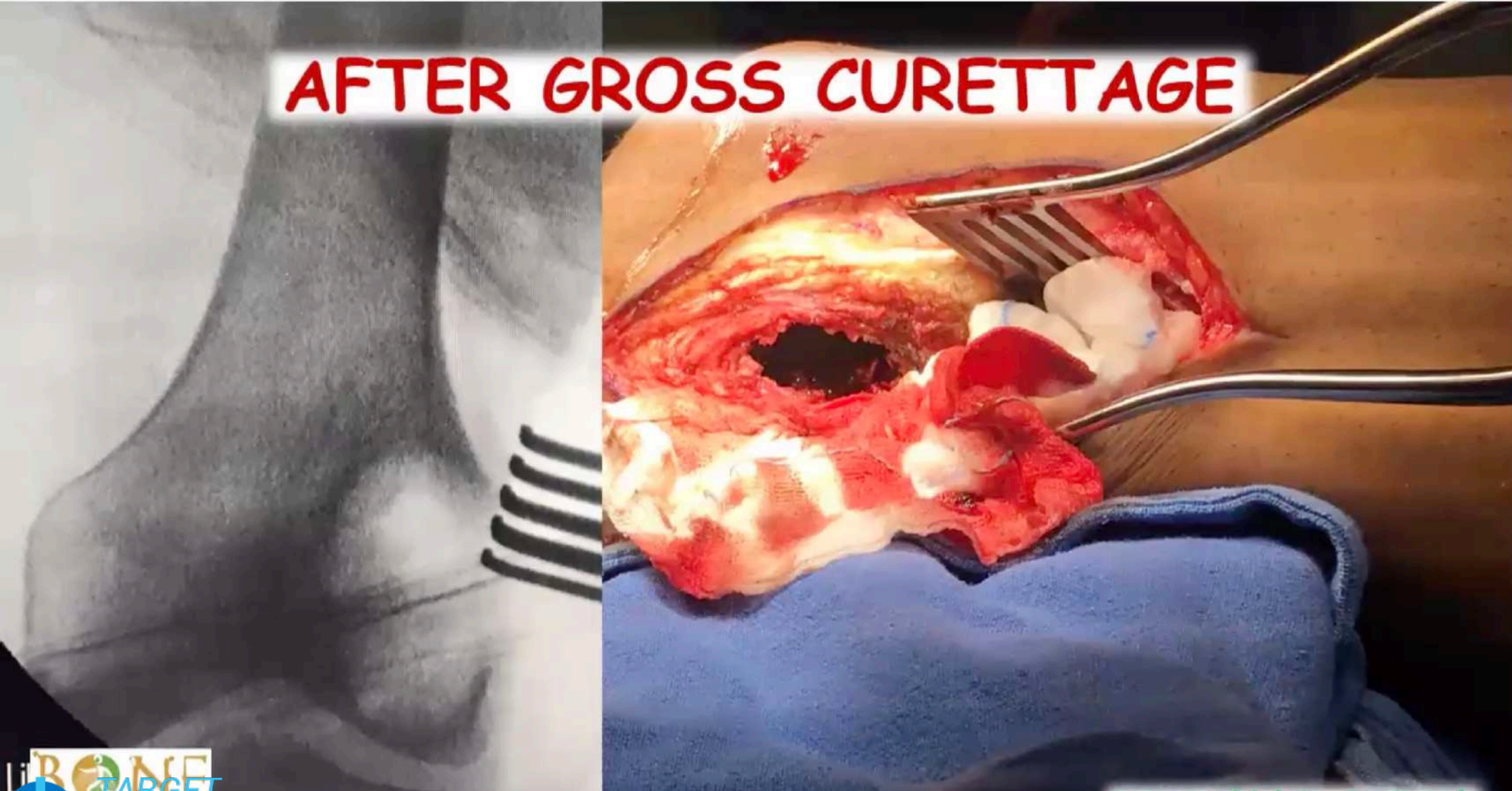


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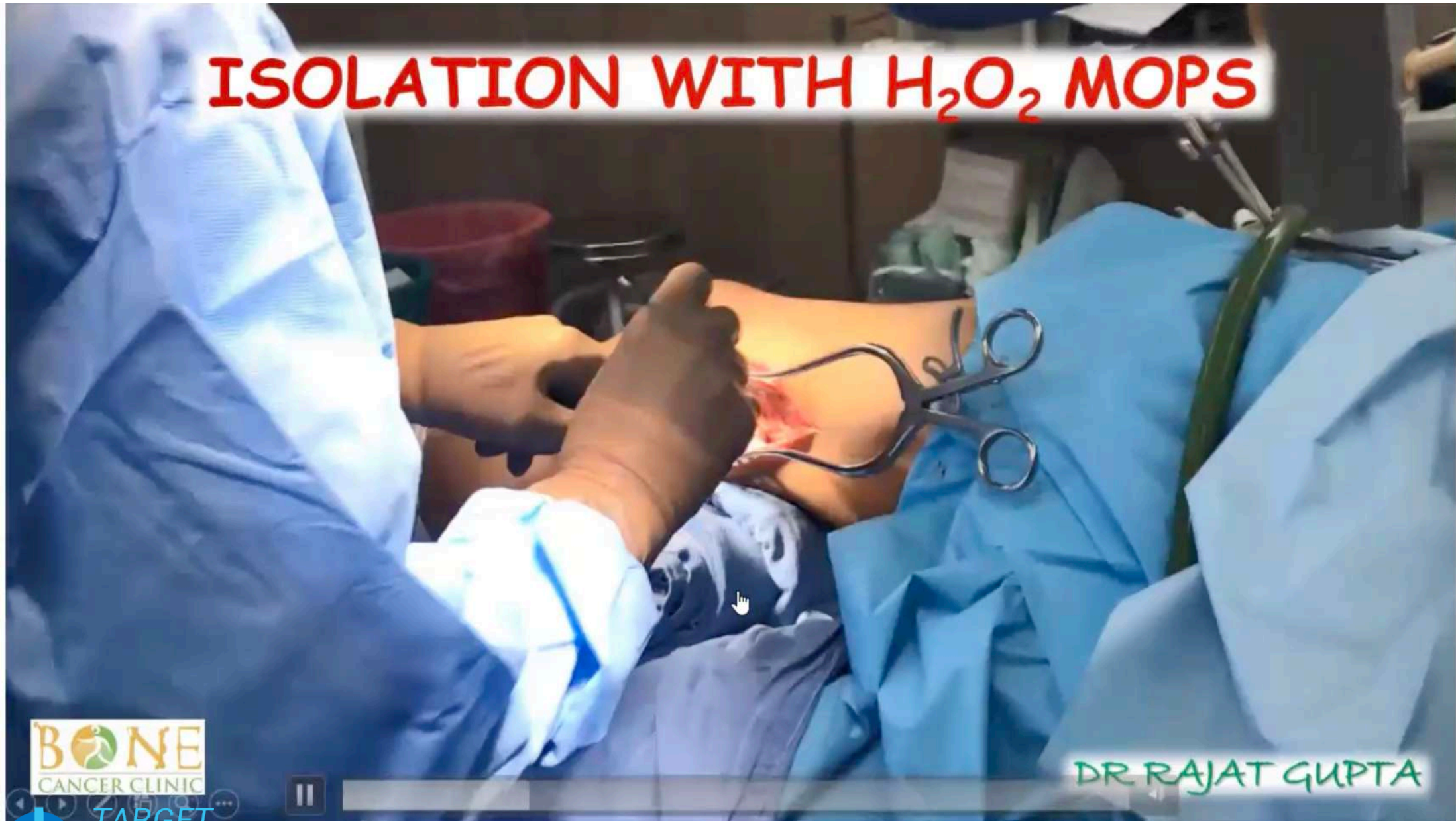


# AFTER GROSS CURETTAGE





# ISOLATION WITH H<sub>2</sub>O<sub>2</sub> MOPS



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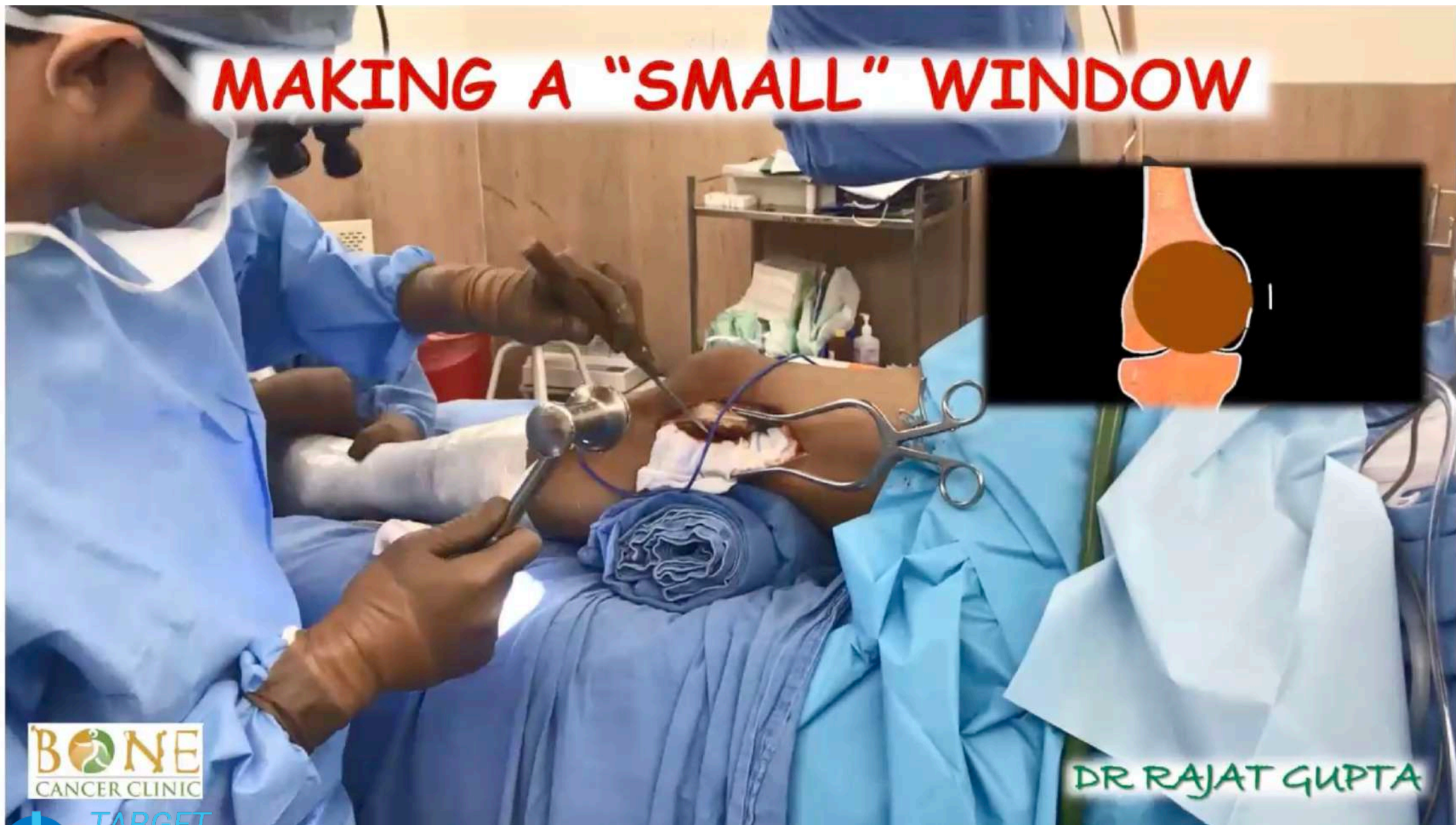
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# MAKING A "SMALL" WINDOW



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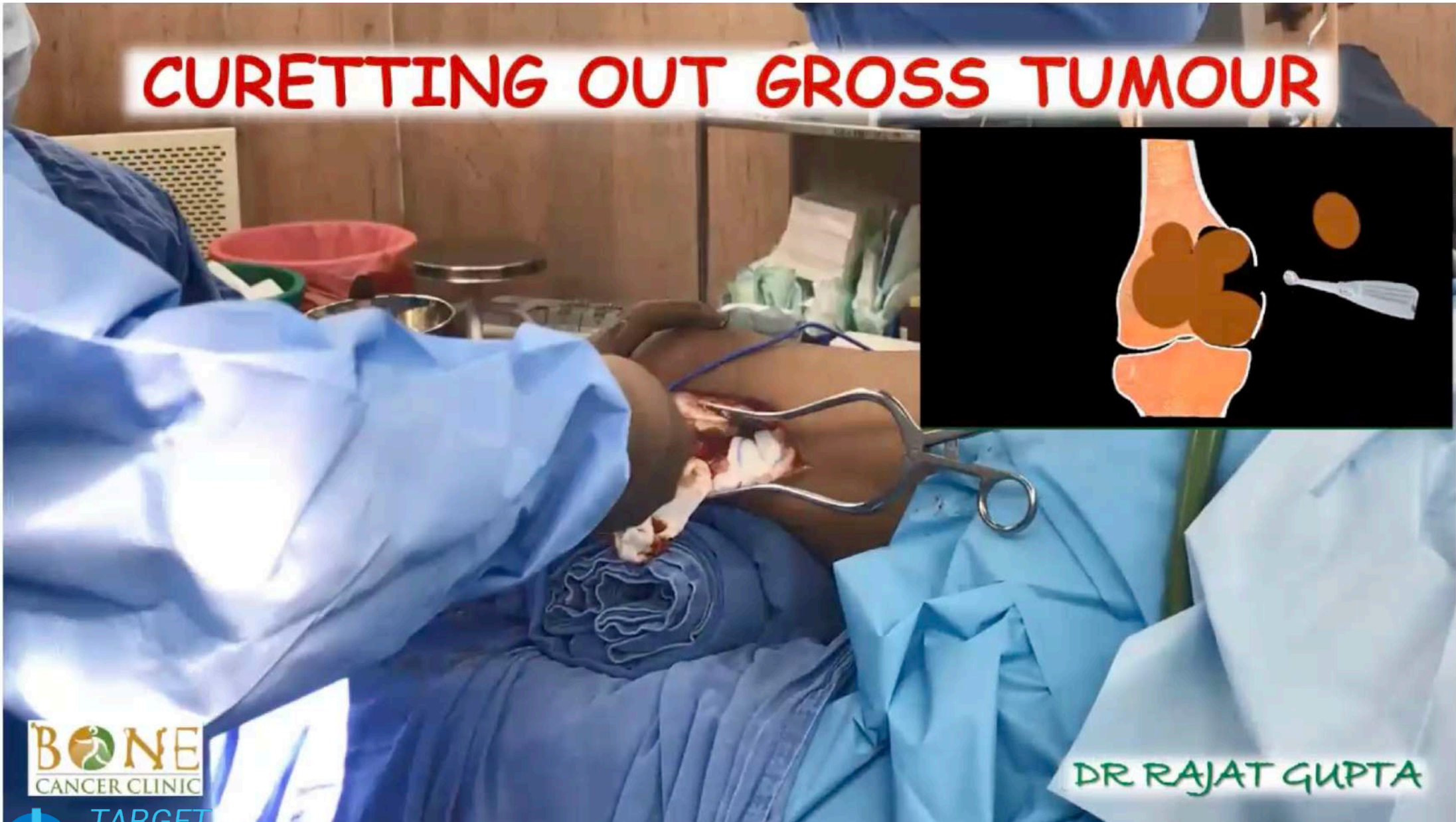
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# CURETTING OUT GROSS TUMOUR



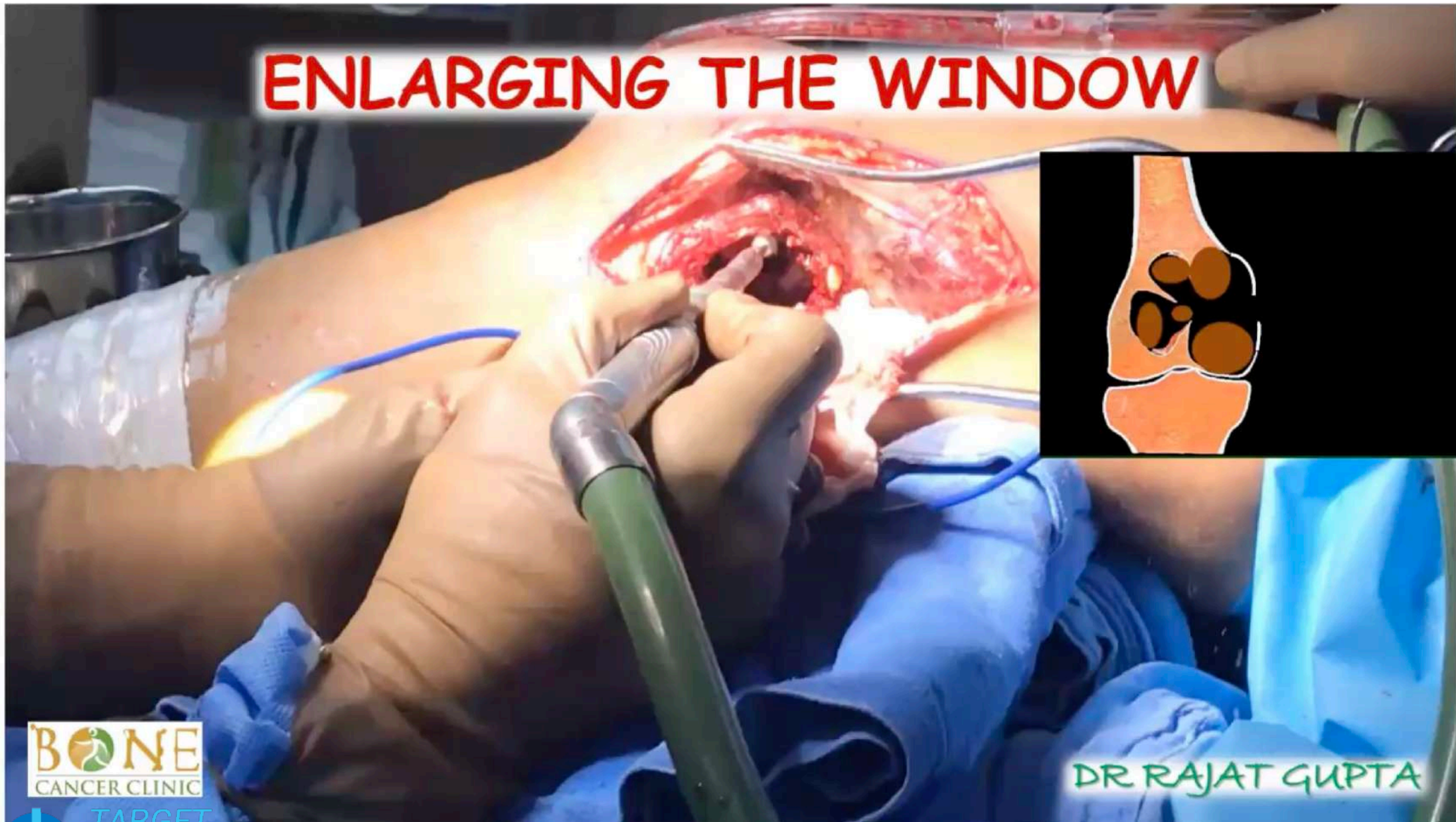
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# ENLARGING THE WINDOW



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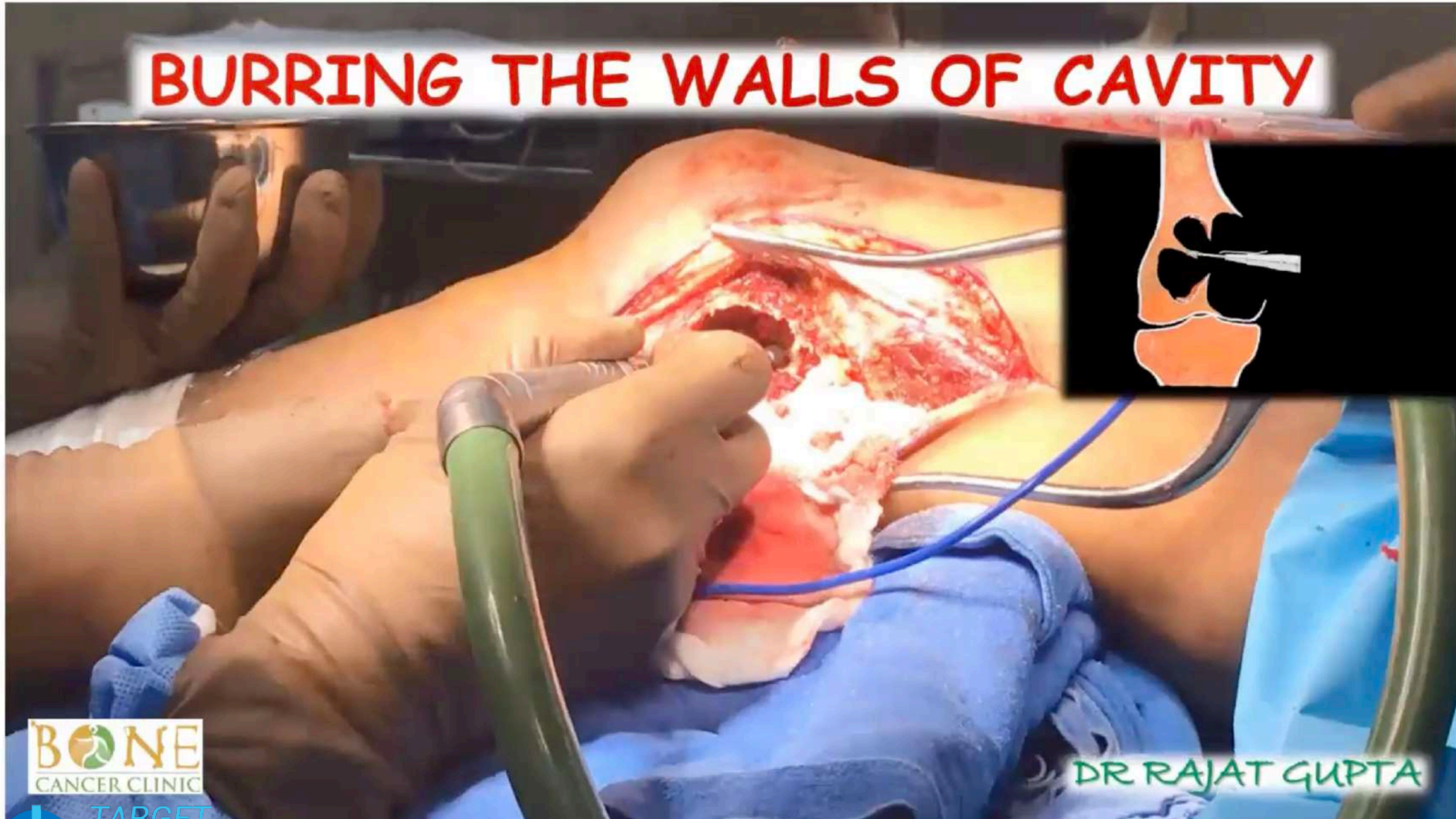
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# BURRING THE WALLS OF CAVITY



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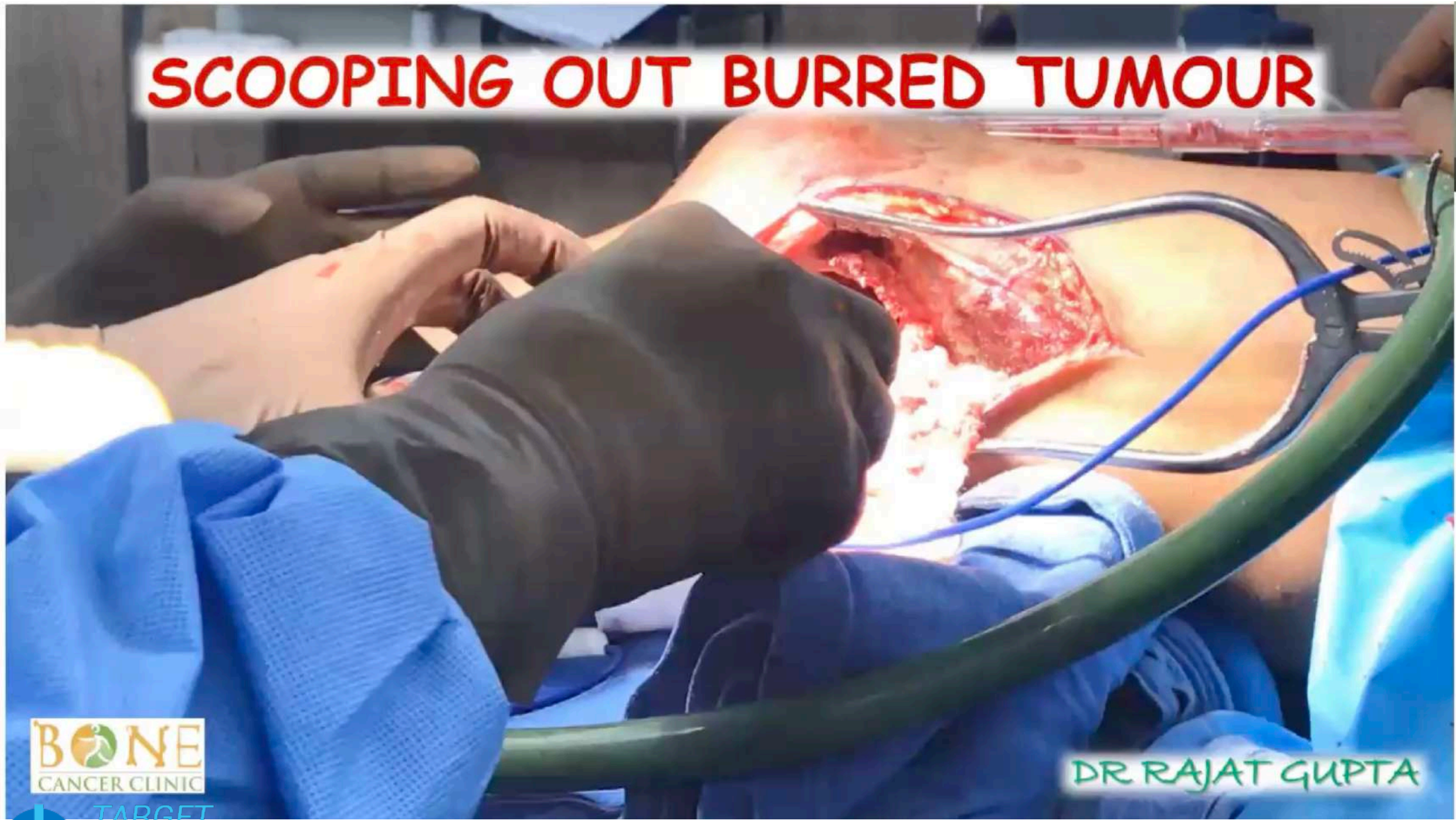
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# SCOOPING OUT BURRED TUMOUR



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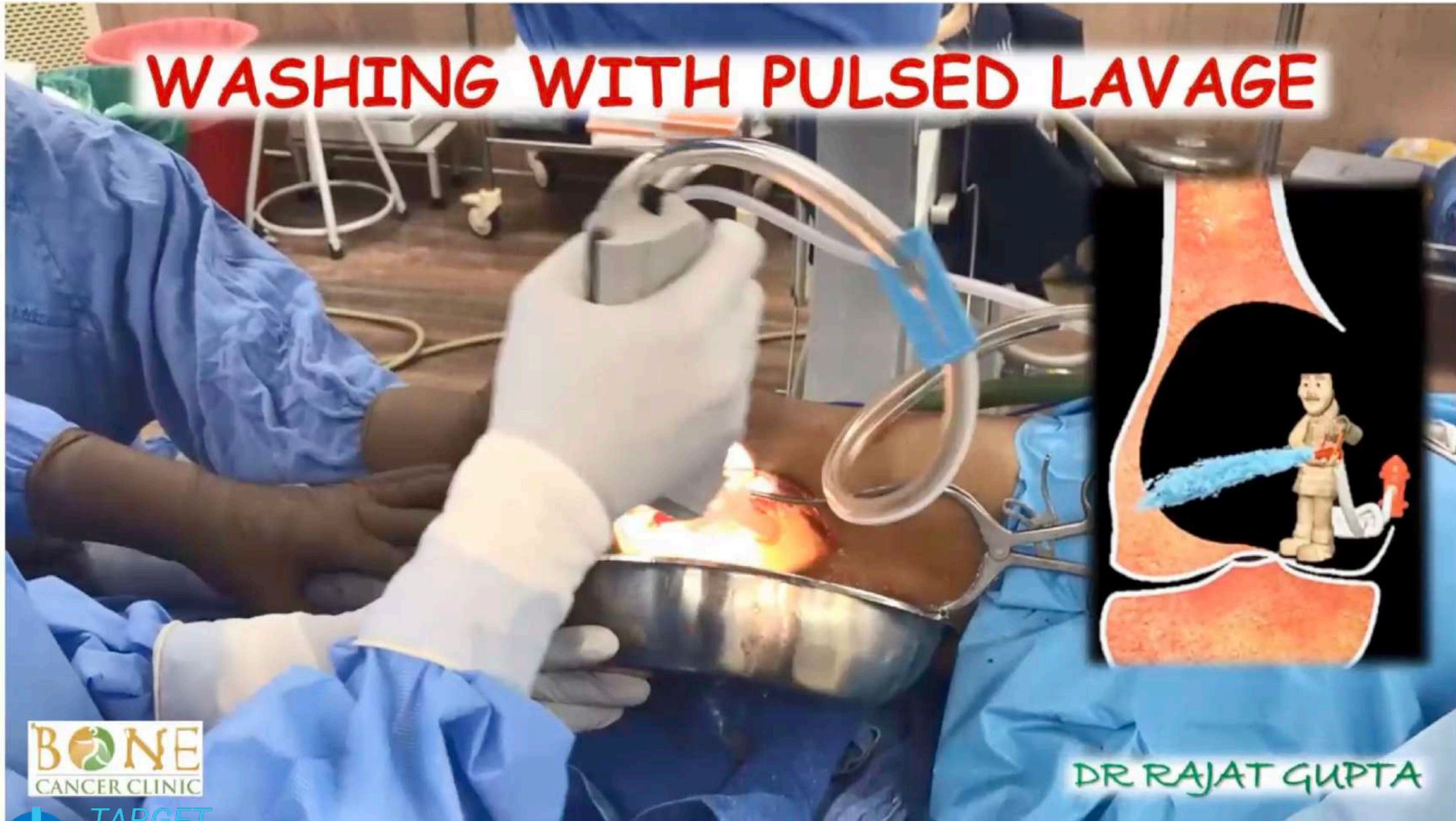
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# WASHING WITH PULSED LAVAGE



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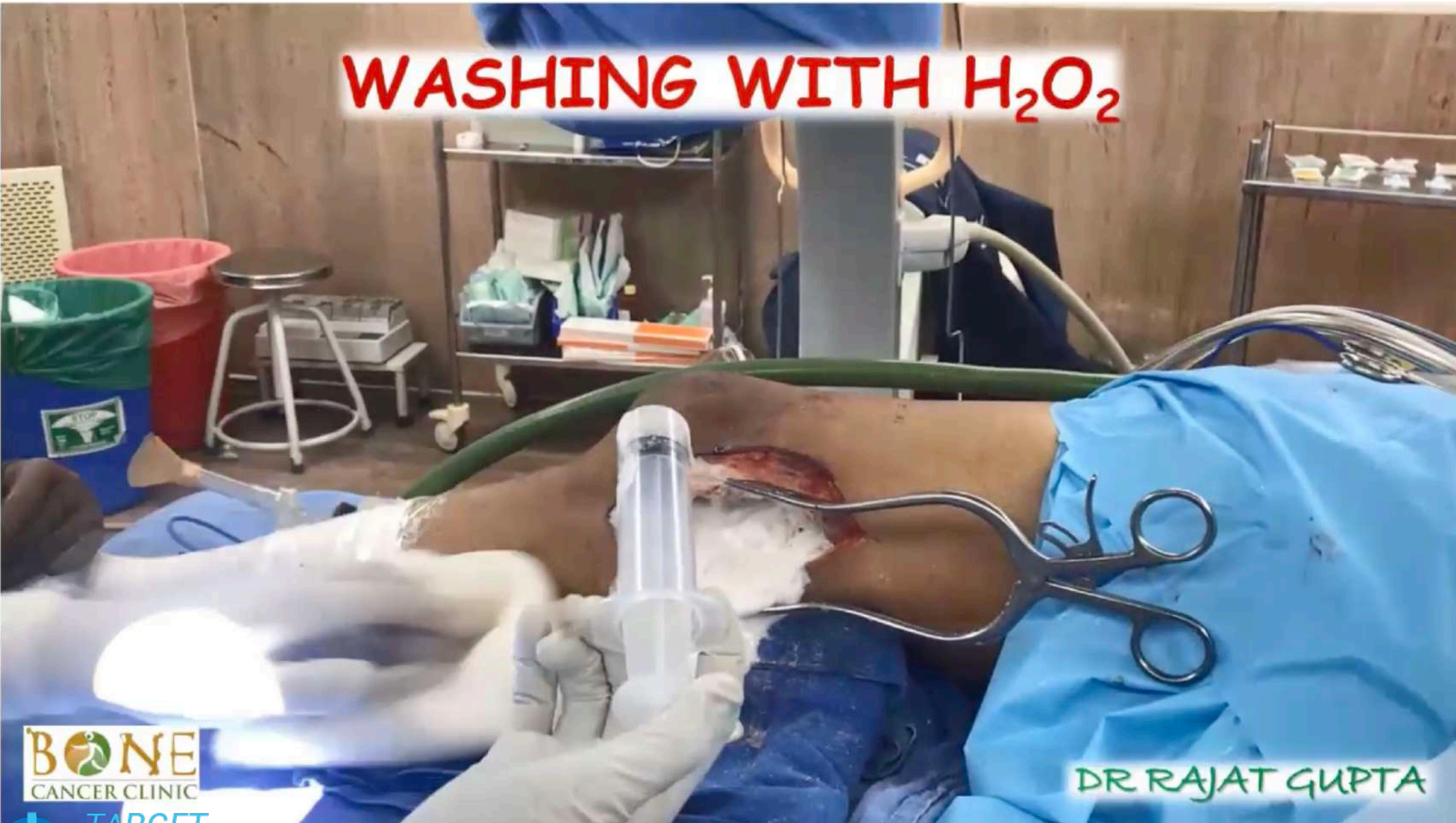
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WASHING WITH H<sub>2</sub>O<sub>2</sub>



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# PACKING CAVITY WITH H<sub>2</sub>O<sub>2</sub> GUAZES



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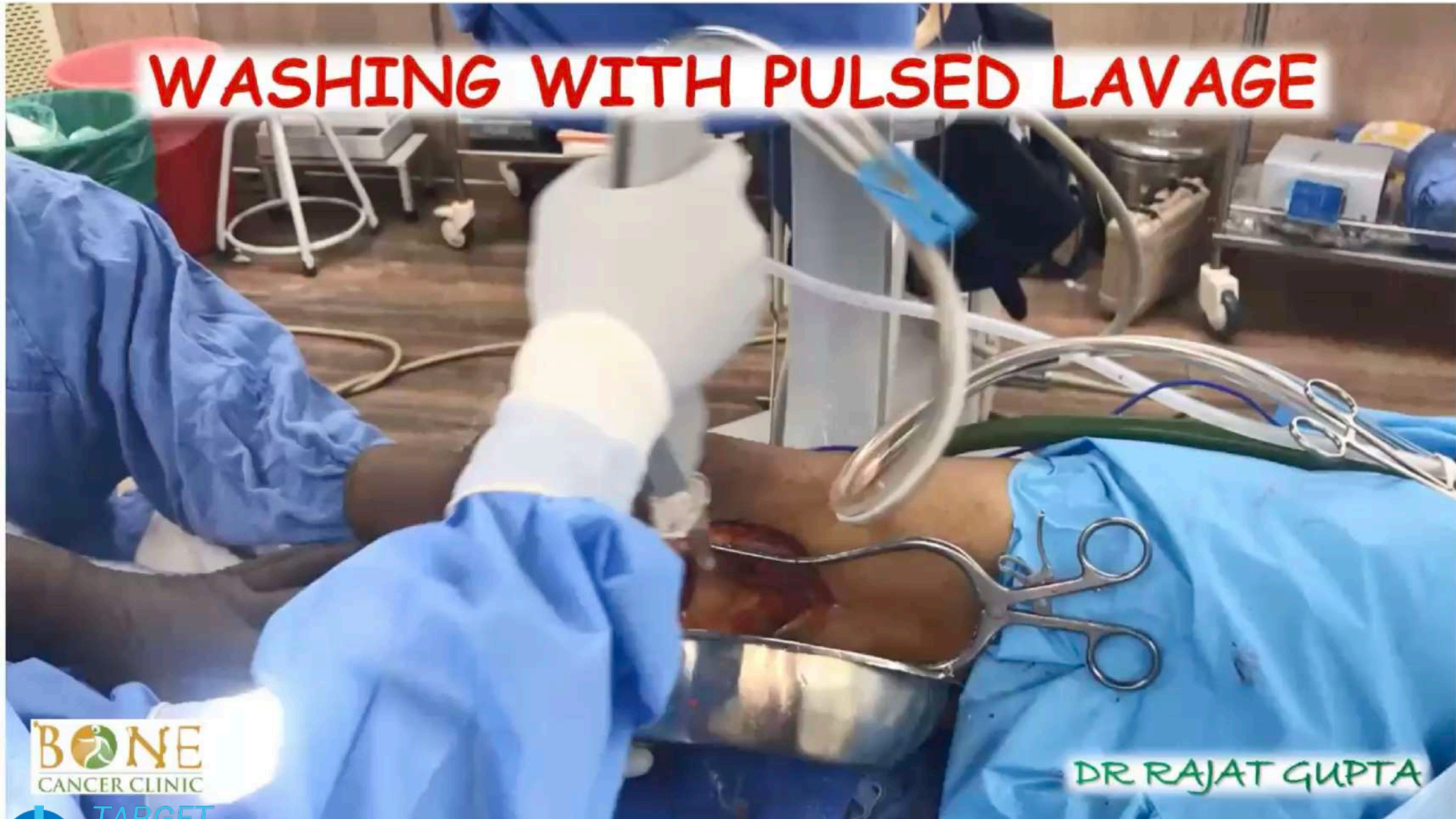
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# WASHING WITH PULSED LAVAGE



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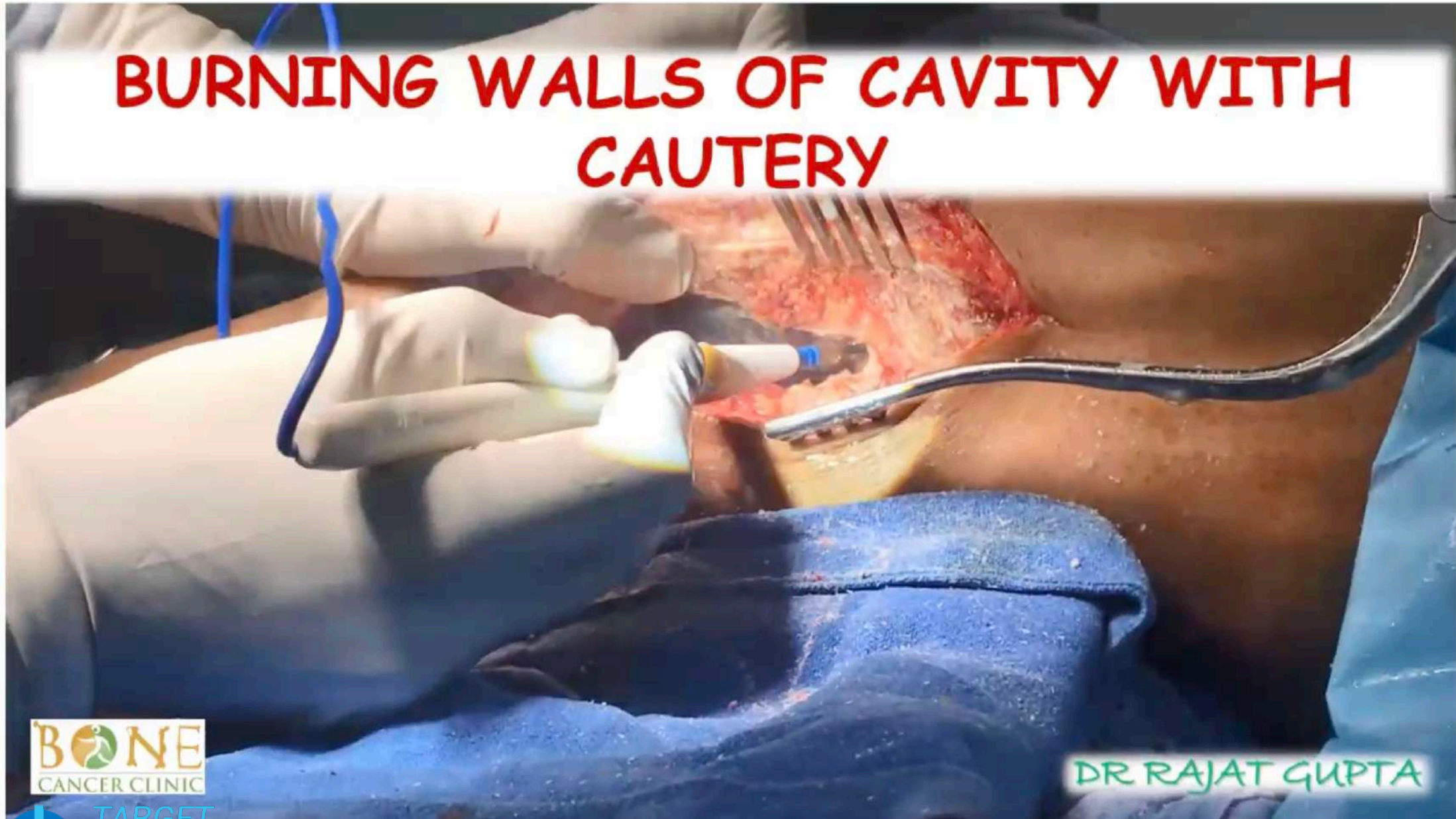
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# BURNING WALLS OF CAVITY WITH CAUTERY



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# ADDITIONAL BURRING



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# ENLARGING THE WINDOW



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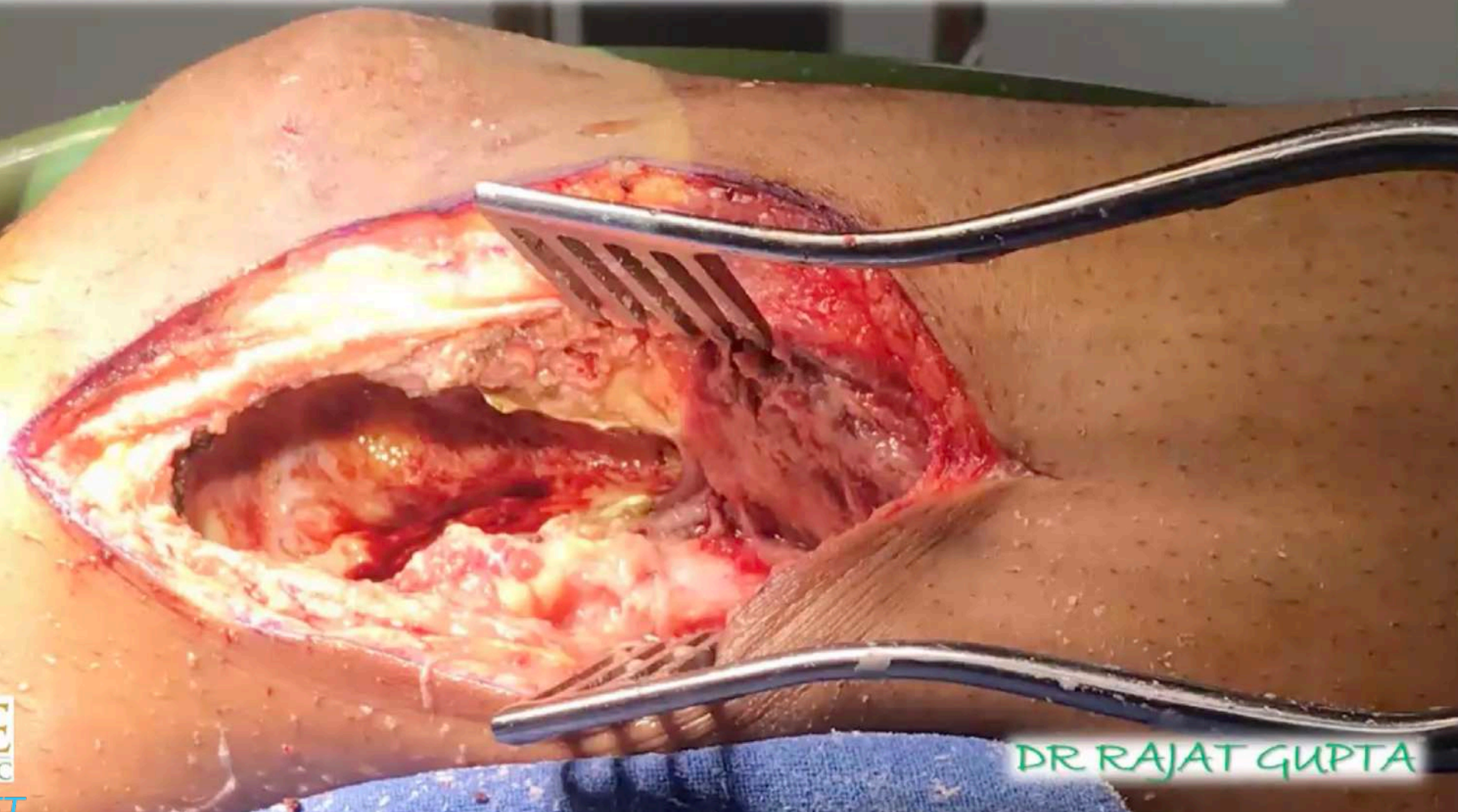
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# AFTER EXTENDED CURETTAGE



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# PACKING WITH CEMENT

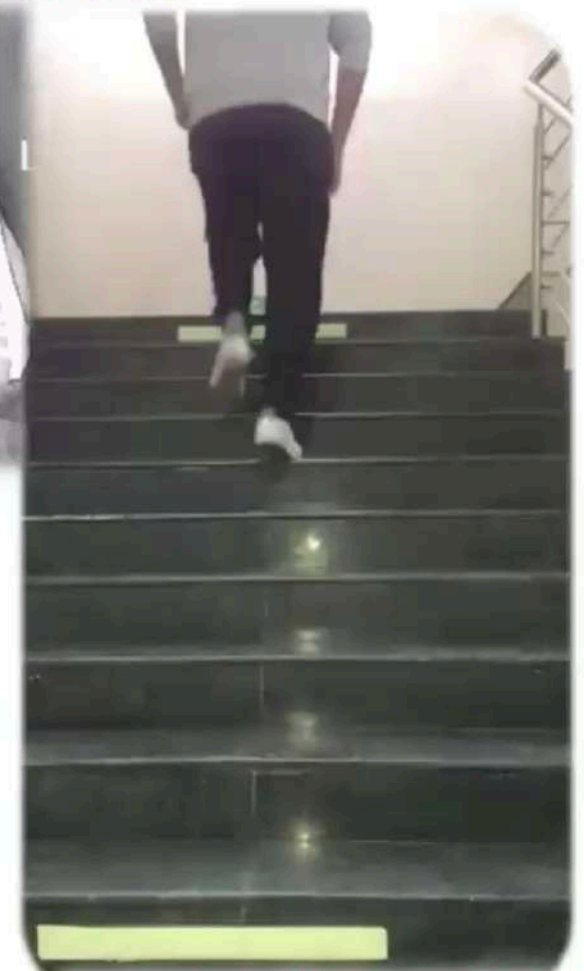
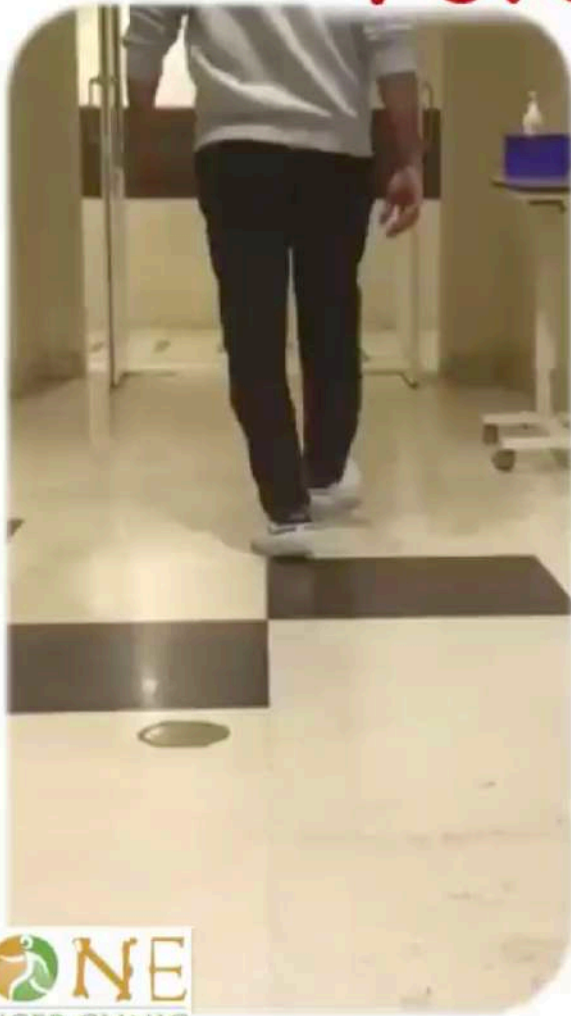
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# FUNCTION AT 3 YEARS



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# EXTENDED CURETTAGE

I just need  
the main ideas



- Good exposure
- Isolation with  $H_2O_2$  mops
- Pulsed lavage, high speed burr
- C- arm guidance
- Adjuvants  $\pm$
- Tumour clearance ➤ Reconstruction

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