###### Purpose

To provide a procedure for the gross dissection of a femoral head for a non-tumor condition.

1. **Principle**

To demonstrate the pathologic process so that a diagnosis can be made microscopically or grossly by a Pathologist.

###### Equipment

1. Ruler
2. Forceps
3. Scalpel
4. Scissors
5. Large Knife
6. Stryker Saw or Table Saw
7. **Safety**
8. **PPE** should be worn.
9. **FORMALIN** is a known carcinogen.
10. **DECALCIFICATION SOLUTION** is a strong acid.
11. **Supplies and Reagents**
12. 10% Neutral Buffered Formalin (pH range 6.9 – 7.2)
13. Decalcifying Solution
14. **Quality Control**

All remaining tissue should be retained in formalin.

1. **Limitations/ Notes**

The following may influence the validity of test results:

1. Bone sections should be fully fixed in formalin before being decalcified.
2. Prolonged decalcification will affect the histologic detail and the preservation of some nuclear antigens.
3. **Procedure**
4. Measure the femoral head and any attached femoral neck (3 dimensions – cm., each).
5. Describe and measure any attached soft tissue (3 dimensions – cm.).
6. Describe the articular cartilage (i.e. smooth, granular, eburnated). Describe any areas where the cartilage is not intact.
7. Mention if peripheral osteophyte formation is present.
8. Examine and describe the spongy/cancellous bone within the medullary cavity, using a Stryker Saw or a Table Saw, if necessary.
9. Describe and measure the thickness of the articular cartilage (cm.).
10. If the femoral head is for degenerative joint disease, osteoarthritis, or rheumatoid arthritis, the specimen is for gross examination only.
11. If the femoral head is for avascular necrosis, submit 2-3 sections that illustrate the cartilage lifting from the underlying cancellous bone after decalcification.
12. If another pathologic process is identified, provide 2-3 representative sections after decalcification.
13. If soft tissue is attached to the femoral head, submit a section.
14. Include in the dictation which cassettes are decalcified.
15. **References**

Hruban RH, Westra, WH, Phelps, PH, & Isacson, C: Surgical Pathology Dissection An Illustrated Guide, New York, NY, Springer-Verlag Inc., 1996.

Lester, SC: Manual of Surgical Pathology, New York, NY, Churchill

Livingstone, 2001.

1. **Authorized Reviewers**
2. Medical Director, Anatomic Pathology
3. Chief, Surgical Pathology

##### Document Control

##### Location of Master: Master electronic file stored on the Beaumont Laboratory server under

S:\AP\_Grossing\_Manual

**Number of Controlled Copies posted for educational purposes: 0**

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**Location of circulating Controlled Copies: Master Grossing Manual** located in Surgical Pathology

##### Document History

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| Signature | Date | **Revision #** |  | **Related Documents****Reviewed/****Updated** |
| Prepared by: *Anne Tranchida, PA(ASCP)* | 09/19/2007 | **r00** |  |  |
| Approved by: *Ali-Reza Armin, MD* | 11/28/2007 | **r00** |  |  |
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| *Ali-Reza Armin, MD* | 12/10/2008 | **r00** |  |  |
| *Anne R. Tranchida,PA(ASCP)* | 10/20/2009 | **r00** |  |  |
| *Ali-Reza Armin,MD* | 10/20/2011 | **r00** |  |  |
| *Ali-Reza Armin,MD* | 04/02/2013 | **r00** |  |  |
| *Mitual B. Amin,MD* | 02/14/2015 | **r00** |  |  |
| *Zhenhong H. Qu, MD* | 03/15/2015 | **r00** |  |  |
| *Kurt Bernacki, MD* | 10/27/2017 | **r00** |  |  |
| *Kurt Bernacki, MD* | 10/22/2019 | **r00** |  |  |
| Revised by: *Heather Genson, HTL(ASCP)CMPACM* | 10/14/2021 | **r01** | Added gross only if for DJD, osteoarthritis, or rheumatoid arthritis |  |
| Approved by: *Kurt Bernacki, MD* | 10/18/2021 | **r01** |  |  |
| *Kurt Bernacki, MD* | 10/20/2021 | **r01** |  |  |
| Revised by: *Heather Genson, HTL(ASCP)CMPACM* | 2/15/2023 | **r02** | updated wording on examining medullary cavity |  |
| Approved by: *Jawwad Arshad, MD* | 3/15/2023 | **r02** |  |  |
| Approved by: *Laura Walters,MD, PhD* | 4/14/2023 | **r02** |  |  |
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