



PAKISTAN NATIONAL JOINT REGISTRY

SECOND ANNUAL REPORT

2015 - 2016



PNJR Report 2015-16

Theme

PNJR as a success model for development of surgical and medical national registries in Pakistan

Annual Report of Pakistan National Joint Registry

Pakistan Arthroplasty Society (PAS)
Pakistan National Joint Registry (PNJR)
www.arthroplasty.org.pk
www.pasnjr.org



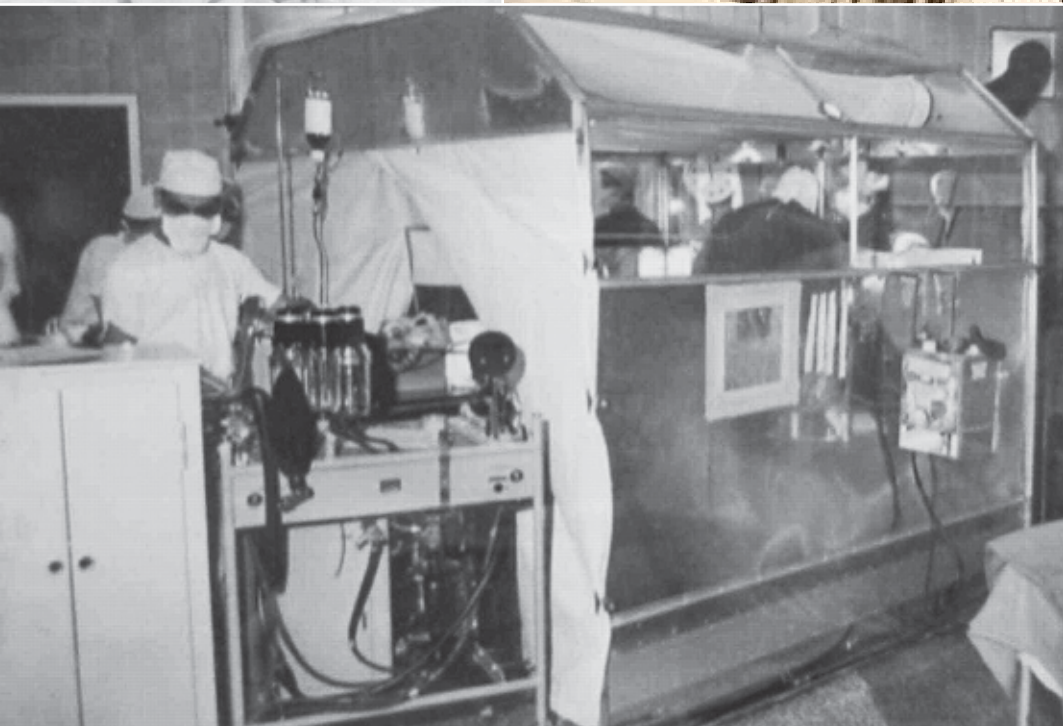


John Charnley British Orthopedic Surgeon Known For: Hip Replacement

Feat: Pioneered the hip replacement operation, which is now one of the most common operations in the world, and created the "Wrightington centre for hip surgery".

Contents

Foreword	05
List of Authors	07
PNJR Steering Committee	09
PART 1 – INTRODUCING PNJR 2nd Annual Report	
1. Introduction to Pakistan Arthroplasty Society	13
2. Introduction of Pakistan National Joint Registry (PNJR)	19
3. PNJR Clinical Coordinator Network	25
4. PNJR Stake Holder Network	31
5. Registry Upgrades	37
6. PNJR as a Success Model	43
PART 2 – DATA ANALYSIS AND INTERPRETATION	
1. Primary Total Knee Arthroplasty	47
2. Revision Total Knee Arthroplasty	61
3. Primary Total Hip Arthroplasty	69
4. Revision Total Hip Arthroplasty	89



Foreword



I have much pleasure in writing a forward to the Second Annual Report of the Pakistan National Joint Registry (PNJR). Joint Replacement Registries are becoming increasingly recognised worldwide for the valuable information they provide on the outcomes of all forms of joint replacement surgery. The first national joint replacement registry was initiated by the Swedish Orthopaedic Association in 1975 to prospectively monitor knee replacement surgery and this model was taken up very successfully in the Scandinavian countries. There are now over 50 well established national and regional joint replacement registries which help monitor the practice in their respective countries. The International Society of Arthroplasty Registries (ISAR) acts as an umbrella organisation to bring together all persons who are interested in the science of joint registries. While many of these registries are well established with long term follow up it is pleasing to see new emerging registries and the Pakistan Arthroplasty Society has to be commended for introducing their National Joint Registry.

As stated in the introduction the Pakistan Arthroplasty Society's aim is to promote arthroplasty training in all major cities in Pakistan and along with this develop a quality arthroplasty registry. This requires strong leadership and a proper governance board which has been established by the society. This has resulted in its recognition by ISAR, the network of orthopaedic registries in Europe and the Swedish Knee Arthroplasty Register. I believe the association can be particularly proud of the fact that the PNJR is the first registry across the health sector in Pakistan and its early success I'm sure will be replicated in other health fields

I whole heartedly recommend this Second Annual Report of the PNJR for all people interested in improving the care of orthopaedic arthroplasty patients.

Prof. Richard De Steiger

Professor of Surgery

Epworth HealthCare
The University of Melbourne

President

International Society of Arthroplasty Registries ISAR

Deputy Director

Australian Orthopaedic Association National Joint Replacement Registry AOA NJRR



Zainulabidin Kamaluddin Kazi was born in Kapadvanj, Gujarat in 1920. He graduated from Bombay's Grant Medical College in 1945, qualified as a Fellow of the Royal College of Surgeons in 1948 and joined what was then Jinnah Central Hospital in Karachi as the first resident surgeon in 1949. ZK Kazi, was one of Pakistan's first orthopaedic surgeons, worked literally till the last moments of his life.

List of Authors

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Treasurer, Pakistan Arthroplasty Society
National Coordinator, Pakistan National Joint Registry (PNJR)
Head, Department of Orthopaedics,
Indus Hospital, Karachi

3 Dr. Muhammad Ather Siddiqi

MBBS, MRCS (Glasg), FCPS (Orth)
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Research Partner

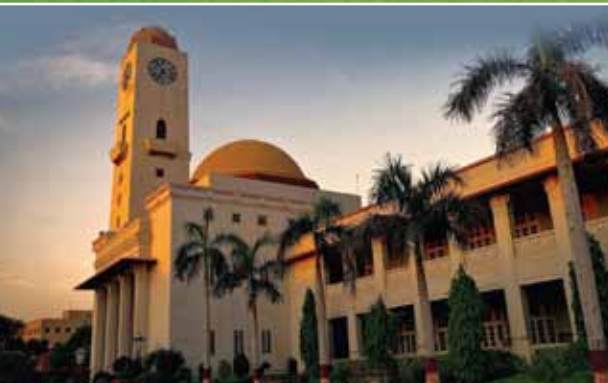
1. Health Reserch Advisory Board (HRAB)
2. Metrics Research

PART

1

INTRODUCING

PNJR 2nd Annual Report



Introduction to Pakistan Arthroplasty Society

Section

I



King Edward Medical University

King Edward Medical University formerly known as King Edward Medical College is the oldest medical school in Pakistan. Mayo Hospital is the attached hospital, which was built in 1872 and was named after Lord Mayo.

Introduction to Pakistan Arthroplasty Society

I - Introduction

Pakistan arthroplasty society (PAS) is the official representative organization for Joint replacement surgeons of Pakistan. Our moto is promotion of cooperation, collaboration and team work in order to sustain and advance arthroplasty in Pakistan. We are aimed at creating leadership opportunities and provide training to the next generation of orthopaedic surgeons in the country.

II - Aims and Objectives

1. Promote arthroplasty and train orthopaedic surgeons of all major cities of Pakistan.
2. Develop a team of faculty who would conduct training workshops in their respective regions.
3. Develop arthroplasty registry.
4. Liaison with regional arthroplasty societies.
5. Advanced training of senior faculty.
6. Arrange national and international fellowships.
7. Conduct live and cadaveric arthroplasty work shops.

III - PAS Executive Board 2016 – 2017

The board was elected after standard electoral procedure during the second General Body meeting held at Hotel Marriott on 03rd of October, 2015.

President	Prof. Syed Shahid Noor
General Secretary	Prof. Maj. General Sohail Hafeez
Patron	Prof. G.A. Shah
Vice President North	Prof. Amer Aziz
Vice President South	Prof. Mansoor Ali Khan
Treasurer	Prof. Amin Chinoy
Joint Secretary North	Prof. Brig. Suhail Amin
Joint Secretary South	Dr. M. Ather Siddiqi
Executive Members	Prof. Muhammad Arif Khan
Executive Members	Dr. Saleh Mohammad Tareen
Executive Members	Dr. M. Kazim Rahim Najjad

Executive Members Dr. Nasir Ahmad

Executive Members Dr. Imran Shabbir Mughal

IV - PAS International Advisory Board

Pakistan Arthroplasty Society has international advisory board members who are consulted on issues pertaining to academic development of the society.

1. Dr Rami Sorial – Nepean Hospital, Penrith, Australia, President Asia Pacific Arthroplasty Society.
2. Dr. Christopher S. Mow – Stanford University Medical Center, California, USA.
3. Mr. Lo Ngai Nung – Singapore General Hospital, Singapore.
4. Mr. Phil Hirst – Manchester Royal Infirmary, Manchester, UK.
5. Mr. Tanveer Sadique – Manor Hospital, Walsall, UK.
6. Mr. Muhammad Sohail Butt – Russel Hall Hospital, Dudley, UK.

V - PAS Workshops

Pakistan Arthroplasty Society has conducted multiple hands on training workshops for orthopaedic surgeons in different cities of Pakistan including Karachi, Islamabad, Rawalpindi, Peshawar, Multan, Faisalabad and Hyderabad. So far following workshops have been conducted.

1. 15 Total knee arthroplasty including primary and revision surgery workshops.
2. 10 Total hip arthroplasty including primary and revision surgery workshops.
3. 3 Shoulder arthroplasty workshops.

National and International faculty deliver high quality interactive lectures and participants are exposed to live demonstrations of surgical technique and trained on saw bone models and cadaveric hands on dissections. Further 5 workshops are scheduled this year.

Introduction to Pakistan Arthroplasty Society

VI - PAS Fellowship Programs

1. Pakistan Arthroplasty Society is running a simultaneous national fellowship program for aspiring arthroplasty surgeons across 5 centers currently across the country.
 - a. Liaquat National Hospital and Medical College, Karachi
 - b. Combined Military Hospital, Rawalpindi
 - c. Ghurki Trust Teaching Hospital, Lahore
 - d. Institute of Orthopaedic Surgery, Karachi
 - e. Quaid-e-Azam International Hospital, Islamabad

This was initially a 6 month fellowship and each fellow was paid a stipend of Rs. 100,000/- per month for the duration of the fellowship. So far 14 surgeons have been trained in the last 2 years. In 2015, this was re-designed to a full 1 year fellowship and the first intake of the new fellowship are due to complete their training in July, 2016.

2. In addition to this an international fellowship program is also running for outstanding trainees of the national fellowship enabling them to be trained in centers of excellence overseas. So far 2 fellows have completed their training abroad in Singapore. 1 fellow is currently being trained in Taiwan and another fellow is about to leave for Singapore as well.
3. A travelling fellowship for experienced surgeons wishing to update their knowledge and technique up to international standards is also conducted. 8 surgeons have so far benefitted from this travelling fellowship.

VII - PAS Collaborations and Partnerships

1. Pakistan Arthroplasty Society functions as a close sister organization of the Pakistan Orthopaedic Association (POA). PAS has arranged multiple scientific sessions at International Annual Conference organized by POA – Pak ORTHOCON over the last two years and is following suit this year too. High quality educational material has been delivered to the local surgeons at these sessions by expert arthroplasty surgeons from around the world.
2. PAS is collaborating with the following local bodies to enhance research within arthroplasty in Pakistan.
 - a. Health Research Advisory Board (HRAB)
 - b. Metrics Research
3. PAS is a partner of following regional and international organizations. We are constantly promoting our international ties to enhance educational opportunities for orthopaedic surgeons.
 - a. Asia Pacific Arthroplasty Society
 - b. ICJR – Middle East
 - c. JRS – Taiwan
 - d. Thai Hip and Knee Society
 - e. Turkish Arthroplasty Society
 - f. Asean Arthroplasty Association
 - g. Spanish Knee Society
 - h. Iranian Society of Knee Surgery, Arthroscopy and sports Traumatology

Introduction to Pakistan Arthroplasty Society

VIII – Future Directions

- PAS has grown in leaps and bounds and has achieved its objectives and much more in a very short span of time thanks to its members and dedicated board.
- PAS vows to continue to explore new opportunities of training of orthopaedic surgeons of the country to enable the provisions of arthroplasty all across the country for the benefit of the masses.
- PAS is also helping other medical and surgical specialties in enhancing research and academics within their spheres of practice.
- We are working hard to create a positive image of the country in scientific circles specifically and the health sector by enlarge.



Dow University of Health Sciences

Dow Medical College, established in 1941 is a public medical school located in the city of Karachi, Pakistan. In 2003, it became a constituent college of the newly formed Dow University of Health Sciences.

Introduction of Pakistan National Joint Registry

Section

II



Liaquat National Hospital & Medical College

The Liaquat National Hospital (LNH), is located at Stadium Road, Karachi, Sindh, Pakistan. The hospital was established on October 16, 1958.

Introduction of Pakistan National Joint Registry

Pakistan National Joint Registry

The project that is the feather in the cap of PAS is the Pakistan National Joint Registry (PNJR). This is a voluntary registry of joint replacement surgery that was conceived, designed, implemented, funded and solely managed by PAS. It is the first of its kind project across the health sector of the country. It has inspired other specialties in the country to develop disease registries and promote a research culture.

With this report we are proud to announce that our landmark project has completed yet another successful year of operations. The PNJR was established in 2014 with the following objectives.

1. To help collect local joint replacement data in order to facilitate research and analyze outcomes after joint replacement surgery in the local population.
2. To guide local implant suppliers on provision of adequate inventory based on current demand of arthroplasty surgeons consensus group.

The PNJR functions in the following way

1. There is a steering committee that controls the policies of the registry and confidentiality of all database held within the registry.
2. Our research partner Metrics research is responsible for providing software support to run the database. The database is electronically maintained and each PNJR registered user has a unique access enabling them to access their data with full confidentiality.
3. The aim of the PNJR is to generate reports on all aspect of arthroplasties performed in Pakistan and guide implant manufacturers on guidelines to optimize care in our local population.
4. The PNJR is compliant with Good Clinical Practice guidelines (ICH-GCP)

5. Increasing number of hospitals and principal investigators are joining hands with PNJR.
 - a. Number of Principal Investigators - 85
 - b. Number of Hospitals - 55
6. Completeness of data has improved from 70% to 90%.

The first Annual Report of PNJR was published in 2015 and immediately gained international accolade. It was presented at 4th International Congress of Arthroplasty Registries meeting in May, 2015 at Gothenberg, Sweden. It was the only registry from any south Asian country at the meeting.

The second report is to be published by May 2016. It will be presented at 5th ISAR meeting at Wrightington and Manchester UK.

PNJR is currently partner and recognized by following international joint registries and societies.

1. International Society of Arthroplasty Registries (ISAR)
2. Network of Orthopaedic registry in Europe (NORE)
3. Swedish Knee Arthroplasty Register

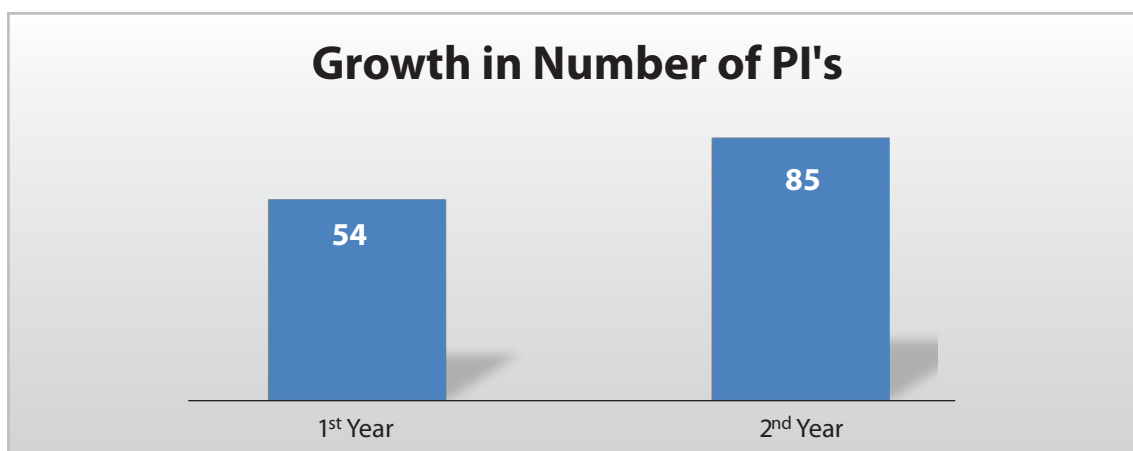
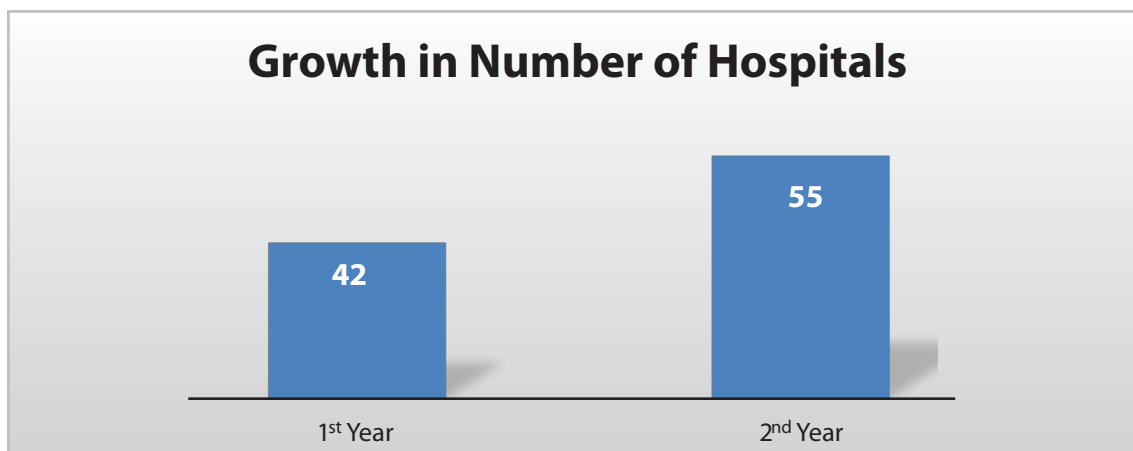
The indigenous effort and voluntary contribution of the steering committee and all PI's have set an example that a national registry can be established and run efficiently in a resource limited setting. In the first annual report, we faced a lot of challenges such as cost constraints, training of PI's, data entry errors. Yet we have maintained our pursuit to develop consensus on treatment protocols and to advance education and training in the field of arthroplasty in Pakistan. With the second annual report, we now are focusing on sustainability and efficient methods of data collection and assimilation to ensure that the registry keeps flourishing and we are able to gain widespread acceptability across the board. This year has improvements in data entry tools and streamlining of data entry have been focused. The following are the main upgrades.

Introduction of Pakistan National Joint Registry

1. Case Report Forms (CRF's) both hardcopy and online versions have been re-designed.
2. Enhanced training of Principal investigators to enable maximum online entry of data.
3. Stronger clinical coordinator network to monitor completeness of CRF's.
4. Hiring of data entry officers to enter paper forms into the registry software.
5. Quarterly analysis of data throughout the year in order to have a more frequent feedback system to PI's and make data cleaning procedures more efficient.
6. Number of Principal Investigators has increased.
7. Number of participating hospitals/Institutions has increased.

We are extremely committed to continue to improve and expand the coverage of the registry and to contribute to international data on joint replacement surgery.

Introduction of Pakistan National Joint Registry

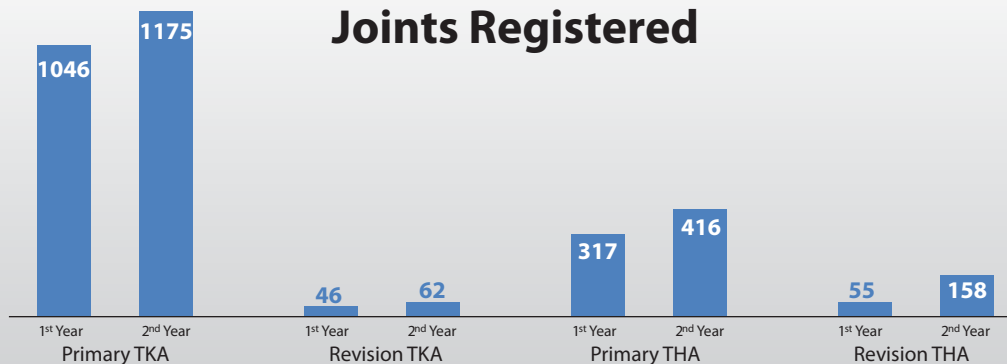


Introduction of Pakistan National Joint Registry

Percent Completeness of Data



Growth in Total Number of Joints Registered



PNJR Clinical Coordinator Network

Section

III



Aga Khan University Hospital

The Aga Khan University Hospital (AKUH) in Karachi, established in 1985, is the primary teaching site of the Aga Khan University's (AKU) Faculty of Health Sciences. Founded by His Highness the Aga Khan.

PNJR Clinical Coordinator Network



Health Research Advisory Board (Health RAB) a registered society. It is a “think tank” of senior clinicians, researchers & academicians who are committed to the mission of Health RAB which is to “Develop the Research Ecosystem of Pakistan”.

The main objectives of Health RAB are to:

- Provide leadership for developing the medical research ecosystem of Pakistan.
- Create synergy among the existing stakeholders and bring them together.
- Build capacity of the healthcare professionals involved in conducting research.
- Collaborate & network locally as well as globally to initiate research activities.
- Facilitate the development and implementation of a national research policy.

Leadership:

- | | |
|---------------------------------|-----------------------------|
| • Prof. Dr. Abdul Gaffar Billoo | Chairman |
| • Prof. Dr. Abdul Basit | Vice Chairman |
| • Dr. Zakiuddin Ahmed | General Secretary |
| • Prof. Syed Shahid Noor | Chairman Registry Committee |



PNJR Clinical Coordinator Network



PNJR Clinical Coordinator Network



"Metrics Research Pvt. Ltd. is a reputed Clinical Research Organization established since 2003, providing Clinical Research Services to well recognized medical societies, hospitals, pharmaceutical and clinical research companies all across the globe. Metrics Research specializes in Clinical Registries, Surveillance studies, Statistical analysis through SPSS and SAS with professional writings, Phase Trials from Phase I to Phase IV and as well as Bio-Equivalence Studies.

Metrics have highly qualified, trained and experienced clinical research professionals for the execution of services that they offer to their respective clients. Metrics Research took PNJR registry as a challenge and with the experience and qualified professional including CRA's, Coordinator and Medical writers made this dream true. Metrics Research is responsible for training of new PI or Co-PI, Data entry facilitators and Also responsible for the monitoring of data. Metrics Research experienced and qualified medical writers are involved in data analysis and annual report writing as per international guide lines."

Supporting Team

1. Mr. Ali Hyder Qureshi
2. Muhammad Naeem
3. Mr. Rehan Mohsin Khan
4. Dr. Kamlesh Permanand

Team Members

Syed Munawar Ali (CCRP)

Director Coordinator PNJR



Muhammad Asim

Lead Developer and
PNJR Application Manager



Dr. Sadia Altaf

Lead Monitor



Dr. Qurat-ul-Ain

Lead Monitor



Dr. Asif Mehmood (Pharm-D)

Data Coordinator Punjab



Tariq Mubarik (CCRP, RN)

Data Coordinator Sindh





Jinnah Sindh Medical University

Jinnah Sindh Medical University, formerly known as Sindh Medical College, started on April 7, 1973. It achieved university status on June 2, 2012 and thus became third medical university in Karachi.



PNJR Stake Holder Network

Section

IV



Liaquat University of Medical Health Sciences

Liaquat University of Medical & Health Sciences started as a Medical School in 1881 was established to provide excellence in health professional education and research, to educate and train undergraduate and graduate students of medical and health sciences in Pakistan, in accordance to the international standards.

PNJR Stake Holder Network

Pakistan National Joint Registry could not have been formed without the commitments of its valuable stake holders. Each stake holder support and cooperation has enabled us to achieve our 1st year targets. There are number of stake holders but the following few are most significant:

I - Pakistan Arthroplasty Society

The board and members of Pakistan Arthroplasty Society take full ownership of PNJR project and have extended their extensive human and financial resources for the realization of this project. All financial funding for PNJR is exclusively supported by PAS.

II - Patients

Patients are at the center of all we do. Without the contribution of our patients, we would not have achieved this 1st annual report. We believe that their contribution will take us to newer heights in scientific research to benefit the masses in general. PNJR steering committee extends their thanks to all those patients who have contributed to this first annual report.

III - Research/Registry development partners

Metrics Research Pvt. Ltd

Metrics Research took this project as a challenge and devotedly provided its services in designing of protocol, CRF, ICF, data entry and data analysis. The experienced trained team members assisted PNJR in every step of development and publication.

Collage Solutions

Collage Solutions with an extensive knowledge and experience in data management, EDC, eCRF, CTMS design and development provided the expertise to develop PNJR registry database. These provide services from data management, data tracking, data backup and cleaning to complete audit trails, reports/graph

generation, dataset building for SAS/SPSS analysis. They also help in resolving technical site issues and provide training and support to maintain “Data Quality”.

IV - Affiliated Institutions / Clinical Sites

Institutes are the back bone of any clinical research activity. All our registered hospitals are supporting us in providing: access to patient data, logistics for data entry, utilities and use of their valuable and reputable name.

Sindh

1. Liaquat National Hospital, Karachi.
2. The Indus Hospital, Karachi.
3. The Aga Khan University and Hospital, Karachi.
4. Institute of Orthopaedic & Surgery Pvt. Ltd.
5. South City Hospital, Pvt. Ltd, Karachi.
6. Ziauddin University and Hospital, Clifton, Karachi.
7. Jinnah Postgraduate Medical Center, Karachi.
8. Dow International Medical College, DUHS, Karachi.
9. Orthopaedic & Medical Institute, Karachi.
10. Patel Hospital, Karachi.
11. AO Clinic, Karachi.
12. NMI Hospital, Karachi.
13. National Medical Center, Karachi.
14. MediCare Cardiac and General Hospital, Karachi.
15. Abbasi Shaheed Hospital, Karachi.
16. Royal Institute of Medical Sciences, Karachi.
17. Fatimiyah Hospital, Karachi.
18. TO Clinic, Karachi.
19. Seven day Hospital, Karachi.
20. KPT Hospital, Karachi.
21. Darul Sehat Hospital, Karachi

PNJR Stake Holder Network

Punjab

22. Aman Hospital, Civil quarters, Lahore.
23. Allama Iqbal Medical College/Jinnah Hospital.
24. Benazir Bhutto Hospital, Islamabad.
25. Combine Military Hospital, Rawalpindi
26. Combine Military Hospital, Lahore.
27. Doctors Hospital, Johar Town, Lahore.
28. Family Hospital, Lahore.
29. Ghurki Trust Teaching Hospital, Lahore.
30. King Edward Medical University, Mayo Hospital, Lahore.
31. Lahore General Hospital, Lahore.
32. Mid City Hospital, Jail Road, Lahore.
33. National Hospital, Defence, Lahore.
34. Quaid-e-Azam International Hospital, Islamabad.
35. SIMS/ Services Hospital, Lahore.
36. Sheikh Zayed Hospital, Lahore.
37. Sir Ganga Ram Hospital, Queen's Road, Lahore.
38. Surgimed Hospital, Lahore.
39. KRL Hospital, Islamabad.
40. NIRM Hospital, Islamabad.
41. Pakistan Institute of Medical Sciences (PIMS), Islamabad.
42. Mayo Hospital, Lahore.
43. Combind Military Hospital (CMH), Kharian.
44. Allied Hospital, Faisalabad.
45. Wapda Teaching Hospital, Lahore.
46. Fatima Medical Center, Multan.

Khyber Pakhtunkhwa

47. Hayatabad Medical Complex, Peshawar.
48. Khyber Teaching Hospital, Peshawar.
49. North West General Hospital, Hayatabad, Peshawar.
50. Rehman Medical Institute, Peshawar.
51. Lady Reading Hospital, Peshawar.

Baluchistan

52. Bolan Medical Complex Hospital. Quetta.
53. Doctors Hospital, Quetta.
54. Saleem Complex Hospital, Quetta.
55. Combind Military Hospital (CMH), Quetta.

V. Principal Investigators

Surgeons who strive hard to enter the data and keep the registry ticking are what keeps this registry alive. Following is the list of our registered investigators.

Sindh

1. Prof. Syed Shahid Noor
2. Prof. Muhammad Amin Chinoy
3. Prof. Zaki Idrees
4. Prof. Intikhab Taufiq
5. Prof. I.A. Jokhio
6. Prof. Muhammad Umar
7. Prof. Anisuddin Bhatti
8. Prof. Mansoor Ali Khan
9. Prof. Kamran Ahmad
10. Prof. Pervez Anjum
11. Prof. A.R Jamali
12. Prof. Asif Qureshi
13. Dr. Imran Ali Shah
14. Dr. Iqbal Mallick
15. Dr. Israr Ahmed
16. Dr. S. Sajid Hussain
17. Dr. Masood Umer
18. Dr. Riaz Hussain Lakdawala
19. Dr. Shehryar Noordin
20. Dr. Mujahid Jameel
21. Dr. M. Ather Siddiqi
27. Dr. Imtiaz Ahmed Hashmi
28. Dr. M. Idrees Shah
30. Dr. M. Sohail Rafi
31. Dr. Naseem Munshi
32. Dr. M. Noman Iqbal

PNJR Stake Holder Network

33. Dr. M. Tariq Hasni
34. Dr. S. Ghazanfer Ali Shah
35. Dr. Col. S. Faraz Anwar

Punjab

36. Prof. G. A . Shah
37. Prof. Maj. Gen. Sohail Hafeez
37. Prof. Amer Aziz
38. Prof. Abu Bakar
39. Prof. Khalid Aslam
40. Prof. Irfan Mehboob
41. Prof. Rana Dilawaiz Nadeem
42. Prof. Dr. Rana Muhammad Arshad
43. Prof. Syed Muhammad Awais
44. Prof. Dr. Ali Raza Hashmi
45. Prof. Naeem Ahmed
46. Prof. Brig. Sohail Amin
47. Dr. Moghees Ikram Ameen
48. Dr. Farid Ullah Khan Zimri
49. Dr. Ali Akhter
50. Dr. Rashid
51. Dr. Muhammad Hanif
52. Dr. Yawar Anis
53. Dr. Abdullah Shah
54. Dr. Atiquz Zaman
55. Dr. Ijaz Ahmad
56. Dr. Rizwan Akram
57. Dr. Shahzad Javed
58. Dr. Muhammad Naveed
59. Dr. Faisal Masood
60. Dr. Muhammad Akhter
61. Dr. Shafiq Ahmed Shafaq
62. Dr. Saadat
63. Dr. Nisar Ahmed
64. Dr. M. Jahangir Riaz
65. Dr. Obaidur Rehman
66. Brig. Dr. Muhammad Salim
67. Dr. Asim Niaz Naqvi

68. Dr. Abidullah Khan Niazi

Khyber Pakhtunkhwa

69. Prof. M.Arif Khan
70. Prof. Zahid Askar
71. Prof. Malik Javed Iqbal
72. Dr. Shahabuddin
73. Dr. Khushnood Ali Baz
74. Dr. Raja Irfan Qadir
75. Dr. Ghulam Atiq
76. Dr. Salman Bukhari
77. Dr. Awal Hakeem
78. Dr. Syed Imran Bukhari
79. Dr. Zeeshan Khan

Baluchistan

80. Prof. Masood Ahmed Qazi
81. Prof. Iftikhar ul Haq
82. Brig. Dr. Sohail Muzamil
83. Dr. Salah M.Tareen
84. Dr. Amanullah Khan Kakar
85. Dr. Muhammad Buksh Shahwani

VI. List of partner implant suppliers

1. Zimmer, Inc.
2. DePuy, Johnson and Johnson.
3. United Orthopadics.
4. Surgival
5. Biomet
6. Irene
7. Miscellaneous



Bolan Medical College

Bolan Medical College is a medical college located in Quetta, Balochistan Pakistan. It was established during Ataullah Mengal's reign as Chief Minister in 1972.

Registry Upgrades

Section

V



Nishtar Medical College

Nishtar Medical College, established on 28 April 1951, is a public medical school located in Multan, Punjab, Pakistan. It is named after Sardar Abdur Rab Nishtar, a Muslim League stalwart.

Registry Upgrades

After the experience of the first annual report, the steering committee in its meeting identified issues with the pilot system that was implemented. There were a lot of issues that required more efficient management and correction.

Starting with the CRF, modifications were suggested to collect accurate data per case and

1. Fields needed to be converted from open end to checkbox
2. The first CRF did not enable to enter bilateral cases to be entered simultaneously
3. More functional scores needed to be added.
4. Patient reported outcome measures (PROM's) and quality of life scores needed to be added

After several meeting with PAS board, the PNJR steering committee realized that our registry was still young and we had other issues to handle before upgrading our CRF's to more detailed versions. We had to work on data completeness, compliance of PI's and ongoing PI training as well as follow up forms. It was decided to withhold the plans for CRF upgrades until after the 2nd Annual report.

We decided to undertake the difficult task of getting PI's to complete their CRF's. Multiple measures were used to do this.

1. Computer based tutorial was developed that could be administered through online video conferencing to train PI's to use the online CRF's.
2. PI's who chose to continue using the paper CRF were also provided training to complete data entry for every case.
3. Data entry officers were hired in every city who would assist PI's in data entry and would work with individual PI's to upload their paper CRF's to the online version.

4. Our data collection team was strengthened with hiring of riders who would pick up CRF's from PI' and deliver to data entry offices.

The most important step was implementation of quarterly analysis. This enabled us to identify and address issues every 3 months rather than at the completion of the year. We have managed to improve the completeness of data from 70% to almost 90% completed data at present. We aim to continue to improve on this very important aspect of managing the registry.



PNJR No.

1. PATIENT DETAILS

Surname Given Names

☐ Female ☐ Male DOB Age

Weight Height BMI

Address Post Code

CNIC # Tel: Mobile No:

2. HOSPITAL & CONSULTANT DETAIL

Hospital Province

Consultant Surgeon Asst. Surgeon

Date of Admission Date of Operation

Date of Discharge Hosp Registration No.

3. PRE OPERATIVE DEFORMITY

☐ Varus (degree) ☐ Recurvatum (degree)

☐ Valgus (degree) ☐ Extra articular deformity ☐ No ☐ Yes

☐ FFD (degree) (Specify)

4. PRE OPERATIVE RANGE OF MOTION

☐ Extension (degree) ☐ Flexion (degree)

5. COMORBIDITIES

☐ DM ☐ Asthma ☐ HTN ☐ IHD ☐ CKD

☐ Previous knee surgery ☐ Hepatitis Others

6. AMBULATORY STATUS

☐ Community Ambulator ☐ With support ☐ Without support

☐ Home Ambulator ☐ With support ☐ Without support

☐ Non Ambulator

7. ANAESTHESIA DETAILS

ASA GRADE

☐ 1 ☐ 2 ☐ 3 ☐ 4

TYPE OF ANAESTHESIA

☐ General

☐ Spinal

☐ Epidural

☐ General + Epidural

☐ Spinal + Epidural

8. KNEE SOCIETY SCORE

Knee Score (0 - 100)

Functional Score (0 - 100)

9. DIAGNOSIS AND PROCEDURE DETAIL

Primary TKA

☐ R ☐ L

Diagnosis

☐ Osteoarthritis

☐ Secondary Osteoarthritis

☐ Rheumatoid Arthritis

☐ Other Inflammatory Arthritis

☐ Osteonecrosis/Avascular Necrosis

☐ Tumour (Specify)

☐ Other (Specify)

Revision TKA

☐ R ☐ L

Diagnosis

☐ Loosening ☐ Tibia ☐ Femur

☐ Infection

☐ Instability

☐ Periprosthetic Fracture

☐ Femur ☐ Tibia ☐ Patella

☐ Implant Breakage

☐ Femur ☐ Tibia ☐ Patella

☐ Previous Implant Used (Specify)

10. SURGICAL DETAILS

INCISION

☐ Midline (Standard)

☐ Medial Parapatellar

☐ MIS (midline/medial)

TOURNIQUET

☐ No ☐ Yes

DRAIN

☐ No ☐ Yes

BONE GRAFT

☐ No ☐ Yes

CEMENTING TECHNIQUE

☐ Vacuum mixing ☐ No ☐ Yes

☐ Pulse lavage ☐ No ☐ Yes

☐ Application of cement on implant (pre insert) ☐ No ☐ Yes

APPROACHES

☐ Medial Parapatellar

☐ Sub Vastus

☐ Mid vastus

☐ Lateral Parapatellar

☐ Quadricep Snip

☐ ETTO

Other

11. ADVERSE INTRA OPERATIVE EVENT

☐ No ☐ Yes

☐ Fracture ☐ Nerve Injury ☐ Patella Tendon Avulsion

☐ Vascular Injury ☐ Ligament Injury Others

PNJR-Protocol V 1.0-Knee form-version# 2.0-Date: January 25th, 2014



PNJR No.

12. THROMBOPROPHYLAXIS

☐ CHEMICAL ☐ NO ☐ YES

☐ LMWH ☐ Pentasaccharide ☐ Warfarin ☐ Foot Pump ☐ T.E.D Stocking

☐ Direct Thrombin Inhibitor ☐ Aspirin ☐ Intermittent Calf Compression

Other

13. ANTIBIOTIC

Generic Route Duration (Days)

1 I V / Oral

2 I V / Oral

14. POST-OP PAIN MANAGEMENT

☐ PCA (days) ☐ Epidural (days) ☐ Nerve Block (days)

☐ Intra-Op Local (days) ☐ IV (days)

☐ IM (days) ☐ Oral (days)

15. CLINICAL & RADIOLOGICAL IMAGE

☐ Clinical Image ☐ Radiological Image

16. IMPLANT DETAILS

IMPLANT DESIGN

☐ CR ☐ PS ☐ Fixed Bearing ☐ Mobile Bearing

☐ High Flex ☐ CCK ☐ RHK ☐ LPS

☐ Metaphyseal Sleeve ☐ Trabecular Metal Cone

A - FEMORAL COMPONENT

☐ NONE ☐ FEMORAL ☐ STEM

Company Company

Prosthesis Name Prosthesis Name

Cat/Ref # Cat/Ref #

Size Size

FEMORAL AUGMENTS (Complete details by marking boxes) ☐ No ☐ Yes

☐ Distal femoral ☐ Medial ☐ Lateral

☐ Posterior condyle ☐ Medial ☐ Lateral

FEMORAL CEMENT:

☐ No ☐ Yes

CEMENT NAME:

B - TIBIAL COMPONENTS

(Mark relevant box, place company details or complete details by hand)

☐ NONE ☐ ALL POLY ☐ BASE PLATE ☐ INSERT ☐ STEM

Company Company

Prosthesis Name Prosthesis Name

Cat/Ref # Cat/Ref #

Size Size

TIBIAL CEMENT: ☐ No ☐ Yes

CEMENT NAME:

TIBIAL AUGMENTS

☐ Step Wedge ☐ Medial ☐ Lateral ☐ Full

☐ Heml Wedges ☐ Medial ☐ Lateral ☐ Full

☐ Screws ☐ No ☐ Yes Number

C - PATELLA COMPONENT

☐ No ☐ Yes

Company Company

Prosthesis Name Prosthesis Name

Cat/Ref # Size

PATELLA CEMENT: ☐ No ☐ Yes

CEMENT NAME:

17. COMPUTER ASSISTED

☐ No ☐ Yes

System Used

18. POST-OP REHABILITATION PROTOCOL

☐ Full weight bearing ☐ Non weight bearing

Knee range of motion started at day

☐ CPM used ☐ No ☐ Yes Days from _____ to _____

Completed by: Date: / /

Signature:

PNJR-Protocol V 1.0-Knee form-version# 2.0-Date: January 25th, 2014



PNJR No.

1. PATIENT DETAILS

Surname Given Names
☐ Female ☐ Male DOB Age
 Weight Height BMI
 Address Post Code
 CNIC # Tel: Mobile No:

2. HOSPITAL & CONSULTANT DETAIL

Hospital Province
 Consultant Surgeon Asst. Surgeon
 Date of Admission Date of Operation
 Date of Discharge Hosp Registration No.

3. PRE OPERATIVE DEFORMITY

☐ Fixed flexion deformity (degree)
☐ Abduction deformity (degree)
☐ Adduction deformity (degree)
 Ankylosis ☐ No ☐ Yes

4. PRE OPERATIVE RANGE OF MOTION

☐ Flexion (degree) ☐ Extension (degree)
☐ Abduction (degree) ☐ Adduction (degree)
☐ Internal Rotation (degree) ☐ External Rotation (degree)

5. COMORBIDITIES

☐ DM ☐ Asthma ☐ HTN ☐ IHD ☐ CKD
☐ Previous hip surgery ☐ Hepatitis Others

6. AMBULATORY STATUS

☐ Community Ambulator ☐ With support ☐ Without support
☐ Home Ambulator ☐ With support ☐ Without support
☐ Non Ambulator

7. HARRIS HIP SCORE

(0 - 100)

8. CLINICAL & RADIOLOGICAL IMAGE

☐ Clinical Image ☐ Radiological Image

9. DIAGNOSIS AND PROCEDURE DETAIL

Primary THA

☐ R ☐ L

Diagnosis

- ☐ Osteoarthritis
☐ Secondary Osteoarthritis
☐ Rheumatoid Arthritis
☐ Other Inflammatory Arthritis
☐ Osteonecrosis/Avascular Necrosis
☐ Tumour (Specify)

Other (Specify)

Revision THA

☐ R ☐ L

Diagnosis

- ☐ Lysis ☐ Infection
☐ Instability ☐ Dislocation
☐ Loosening
☐ Acetabulum ☐ Femur
☐ Periprosthetic Fracture
☐ Acetabulum ☐ Femur
☐ Implant Breakage
☐ Acetabulum ☐ Femur
☐ Previous Implant Used (Specify)

10. ANAESTHESIA DETAILS

ASA GRADE

☐ 1 ☐ 2 ☐ 3 ☐ 4

TYPE OF ANAESTHESIA

☐ General ☐ Spinal ☐ Epidural

11. SURGICAL DETAILS

POSITION

☐ Supine
☐ Lateral

INCISION

☐ Standard
☐ MIS

DRAIN

☐ No ☐ Yes

BONE GRAFT

☐ No ☐ Yes

APPROACHES

☐ Anterior (Smith Peterson)
☐ Anterolateral (Watson Jones)
☐ Lateral (Hardinge)
☐ Posterior (Southern)

12. ADVERSE INTRA OPERATIVE EVENT

☐ Fracture ☐ Nerve Injury
☐ Vascular Injury ☐ Abductor avulsion injury Others

13. THROMBOPROPHYLAXIS

CHEMICAL

☐ NO ☐ Yes

☐ LMWH ☐ Pentasaccharide ☐ Warfarin

☐ Direct Thrombin Inhibitor ☐ Aspirin

Other

MECHANICAL

☐ NO ☐ Yes

☐ Foot Pump ☐ T.E.D Stocking

☐ Intermittent Calf Compression

Other

PNJR-Protocol V 1.0- Hip form-version# 2.0-Date: January 25th, 2014



PNJR No.

14. ANTIBIOTIC

Generic	Route	Duration (Days)
1	IV / Oral
2	IV / Oral

15. POST-OP PAIN MANAGEMENT

☐ PCA (days) ☐ Epidural (days) ☐ Nerve Block (days)
☐ Intra-Op Local ☐ IV (days)
☐ IM (days) ☐ Oral (days)

16. IMPLANT DETAILS

IMPLANT DESIGN

☐ All Cement ☐ Hybrid ☐ Uncemented ☐ Resurfacing

HEAD SIZE

☐ 22 ☐ 28 ☐ 32 ☐ 36 ☐ Large head

BEARING SURFACE

☐ Metal on poly ☐ Metal on crosslink poly ☐ Ceramic on poly
☐ Ceramic on ceramic ☐ Metal on metal ☐ Ceramic on crosslink poly

CEMENTED CUP

☐ All poly ☐ Long posterior wall ☐ Constrained

CEMENTED FEMORAL COMPONENT

☐ Modularity ☐ Non modular ☐ Modular
☐ Collar ☐ Collared ☐ Collar less
☐ Surface ☐ Smooth ☐ Coated
☐ Shape ☐ Straight ☐ Double tapered ☐ Flanged

CEMENTING TECHNIQUE

☐ Vacuum mixing ☐ Cement restrictor ☐ Stem centralizer
☐ Pulse lavage ☐ Cement gun ☐ Proximal pressurizer

UNCEMENTED CUP

☐ Hemisphere ☐ Porous coated ☐ HA coated ☐ With spikes
☐ Double cup ☐ Jumbo cup ☐ Screw ☐ No ☐ Yes No

UNCEMENTED FEMORAL COMPONENT

☐ Press fit ☐ Porous coated ☐ HA coated ☐ Plasma coated
☐ Wagner ☐ Modular ☐ Fiber metal mesh ☐ Small stem

ACCESSORIES COMPONENT

☐ Reconstruction ring ☐ Burch-Schneider cage
☐ Greater trochanteric grip ☐ Cable ☐ Wire
☐ Trabecular metal augment Others

A - FEMORAL HEAD COMPONENT

☐ No ☐ Yes

Company

Prosthesis Name

Cat/Ref # Size

A - FEMORAL STEM COMPONENT

☐ No ☐ Yes

Company

Prosthesis Name

Cat/Ref # Size

FEMORAL CEMENT: ☐ No ☐ Yes

CEMENT NAME:

B - ACETABULUM COMPONENTS

☐ No ☐ Yes

Company

Prosthesis Name

Cat/Ref # Size

ACETABULUM CEMENT: ☐ No ☐ Yes

CEMENT NAME:

17. COMPUTER ASSISTED

☐ No ☐ Yes System Used

18. POST-OP REHABILITATION PROTOCOL

☐ Non weight bearing ☐ Full weight bearing

Completed by: Date:/...../.....

Signature:

PNJR-Protocol V 1.0- Hip form-version# 2.0-Date: January 25th, 2014



Khyber Medical College

Khyber Medical College, established in 1954, is a public medical institution located in the city of Peshawar, Khyber-Pakhtunkhwa, Pakistan.

PNJR as a Success Model

Section

VI



Ayub Medical College

Ayub Medical College is a leading public medical institute located in Abbottabad, Pakistan. Established in 1985, AMC is home to 1500 students in the MBBS and BDS programs, with clinical rotations occurring at Ayub Teaching Hospital.

PNJR as a Success Model

Pakistan National Joint Registry (PNJR) has had a very positive impact in development of National Registries in Surgical and Medical Allied Specialties in the country. PNIJR has been a very successful project publishing its first annual report within the first 18 months of launch. Since the publication of this report, the acceptance of PNIJR is improving with each passing month with more principal investigators (PI's) registering and percentage of completed case report forms (CRF's) improving. This success has imparted a positive impact on other medical and surgical specialty societies encouraging them to develop their own disease registries.

PNJR and PAS have extended their support. A forum for dissemination of information on registry development and promotion of research culture amongst other professional medical societies was established. This was called the Health Research Advisory Board (HRAB). Prominent medical and surgical specialists in their respective fields with vast experience of clinical and basic health science research and representatives of specialty societies were invited to be members of this board. It has been via this unified platform that the PNIJR steering committee and the PAS board has delivered lectures and conducted sessions both to educate and to provide technical assistance to these sister societies to develop their own disease registries. The following disease registries are almost ready to be launched within this year.

1. Diabetic Registry of Pakistan 1 (DROP 1)
2. Diabetic Registry of Pakistan 2 (DROP 2)
3. Cardiac Registry of Pakistan (CROP)

Development of disease registries and data banks is of paramount importance in conducting effective research targeted at addressing the health issues of the indigenous population of a country. Local factors affecting disease presentation, treatment modalities and outcomes vary considerably depending upon socio-cultural, economic, geographic and religious considerations. For this purpose, development of disease registries is extremely important to a country in

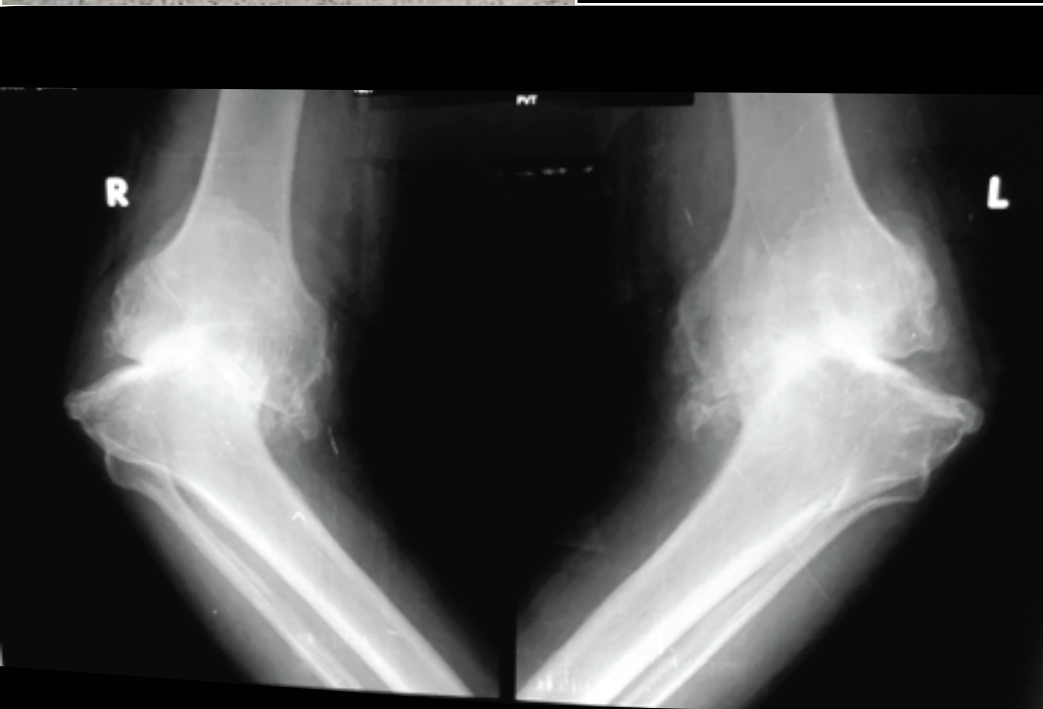
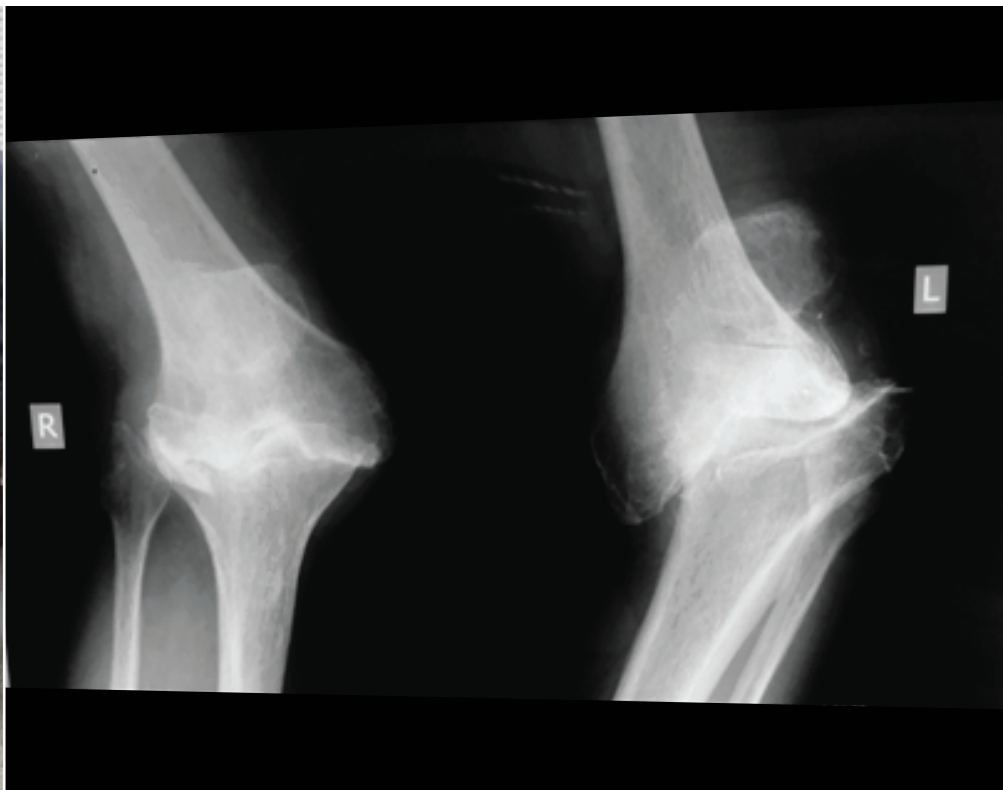
order to target specific needs of the patients and healthcare practitioners. The PNIJR has not only demonstrated a model for indigenous development, successful deployment and effective implementation of a national registry system within a resource limited environment in a very short span of time, but has been instrumental in aiding professional societies across other spheres of the healthcare community in developing their own research tools.

It is vital to establish a success model to positively influence promotion of a culture of research and develop effective means of data collection in a resource constrained environment.

PART

2

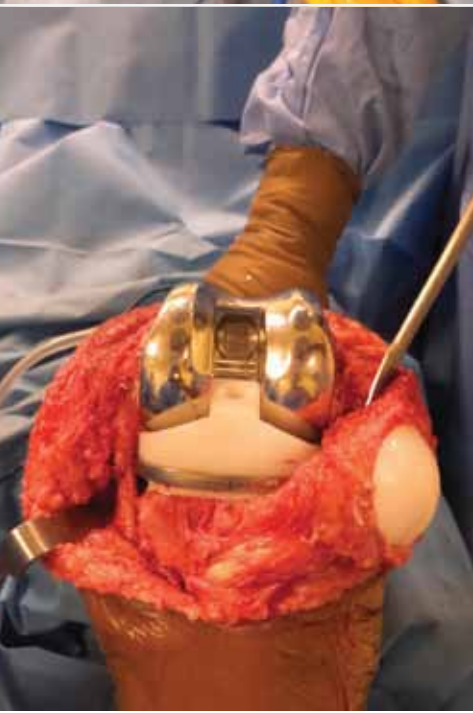
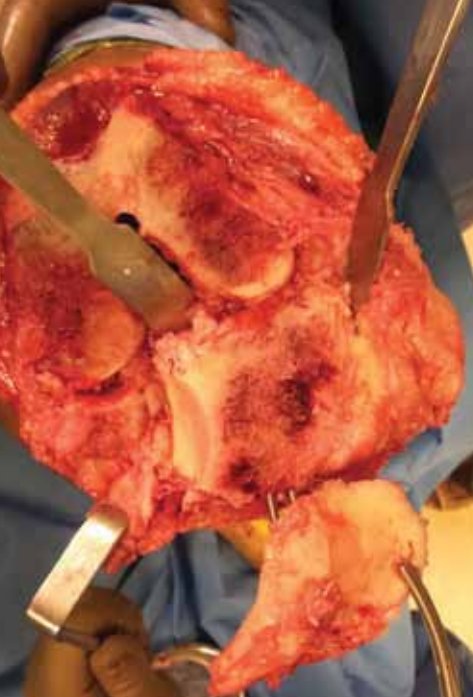
DATA ANALYSIS AND INTERPRETATION



Primary Total Knee Arthroplasty

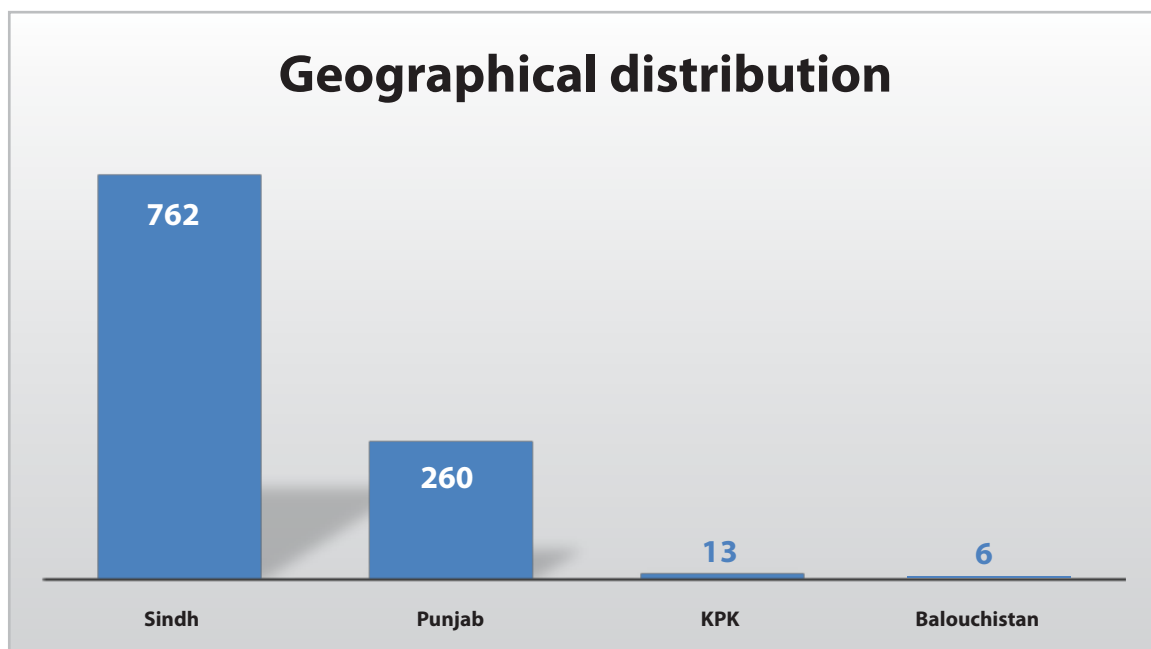
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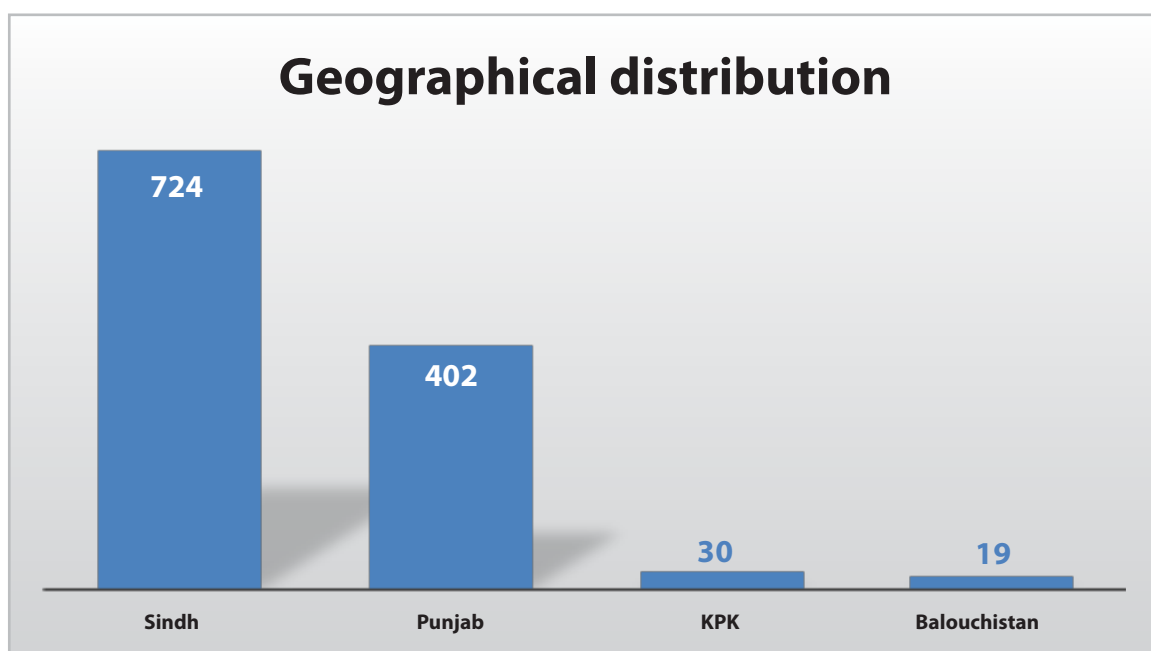


Primary Total Knee Arthroplasty

1st year



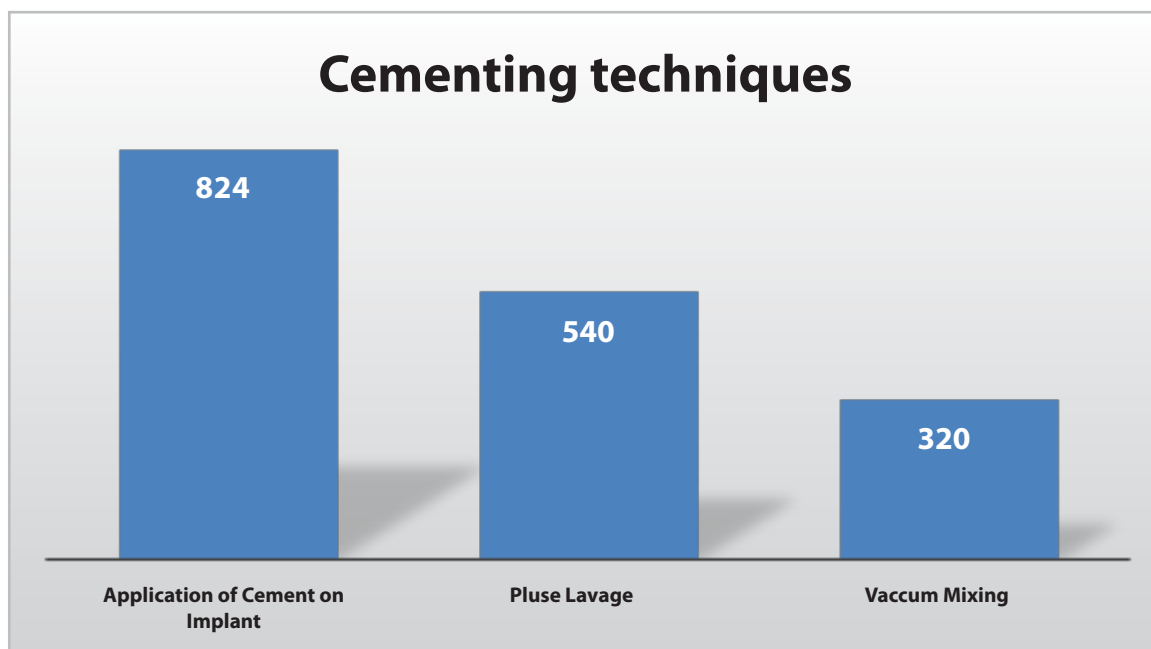
2nd year



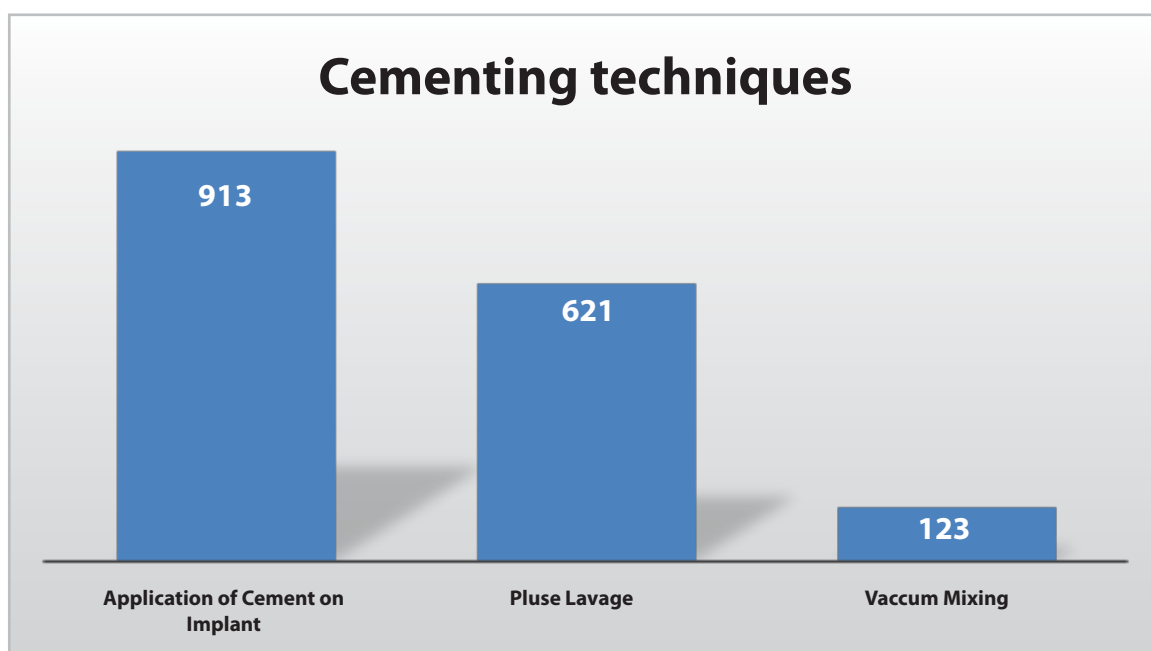


Primary Total Knee Arthroplasty

1st year

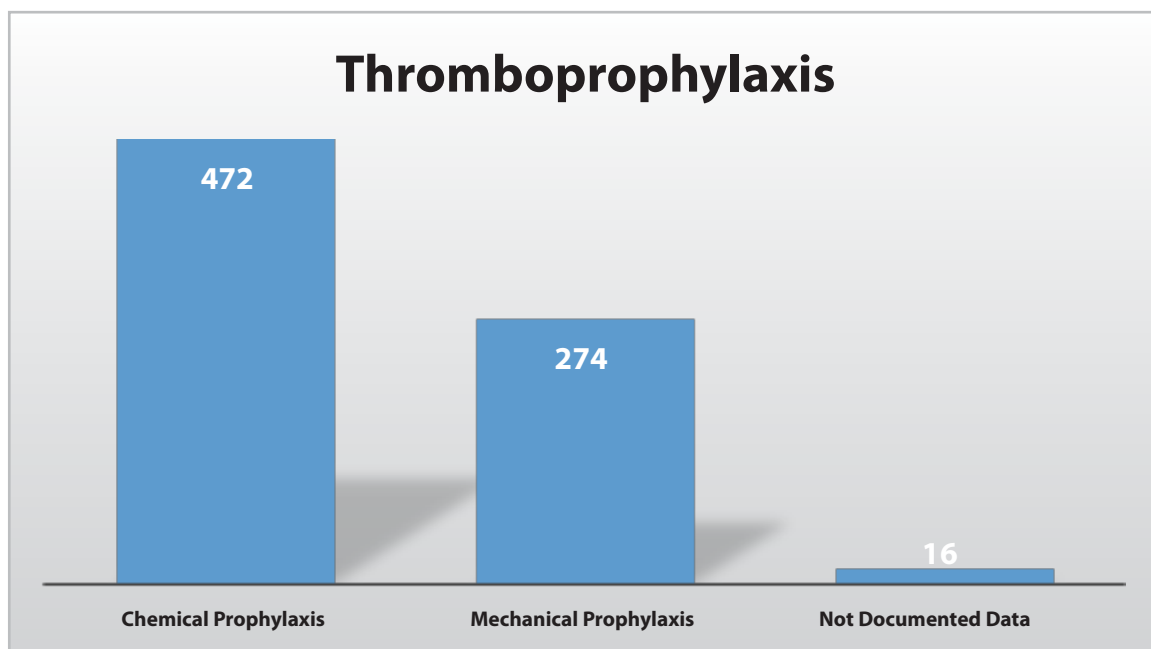


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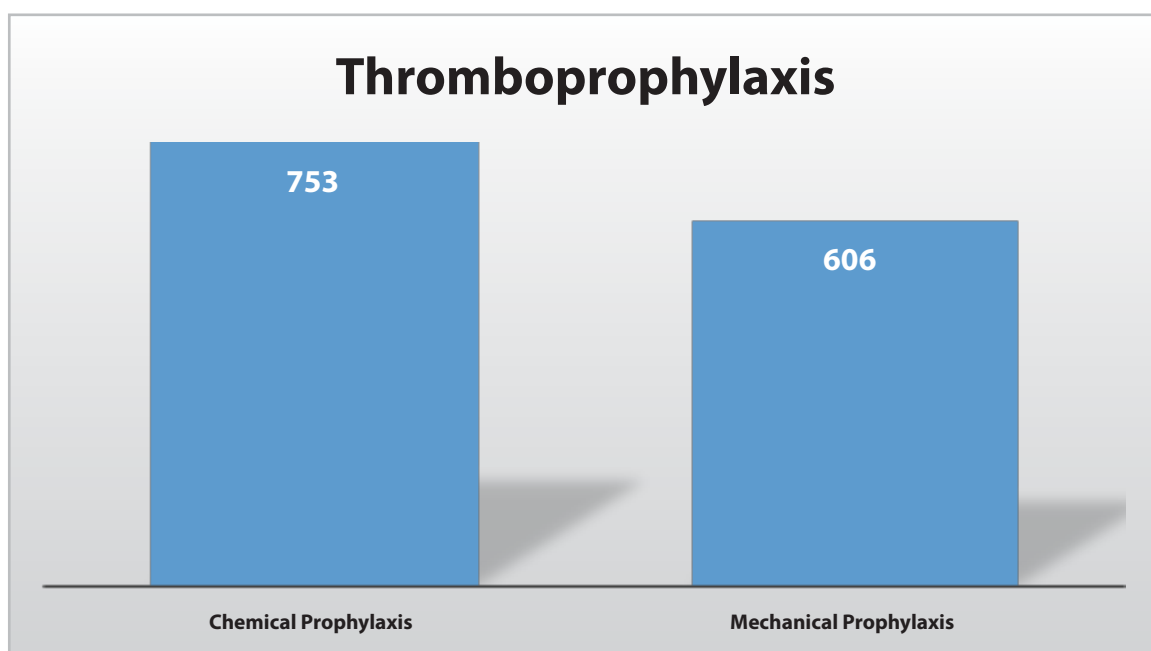


Primary Total Knee Arthroplasty

1st year

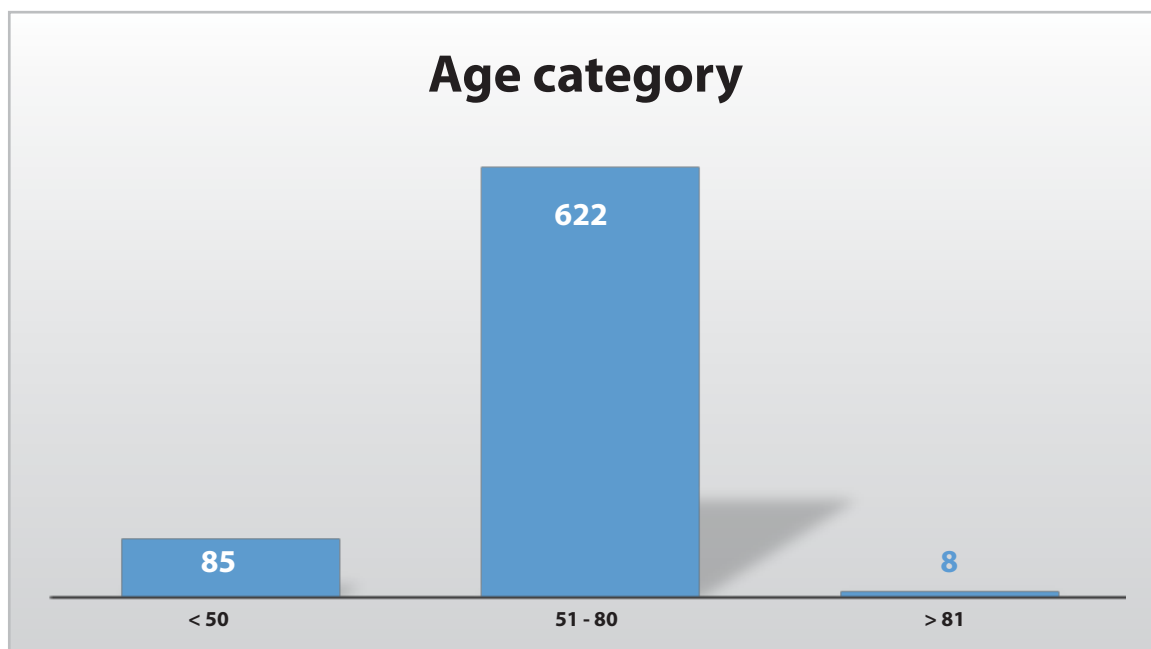


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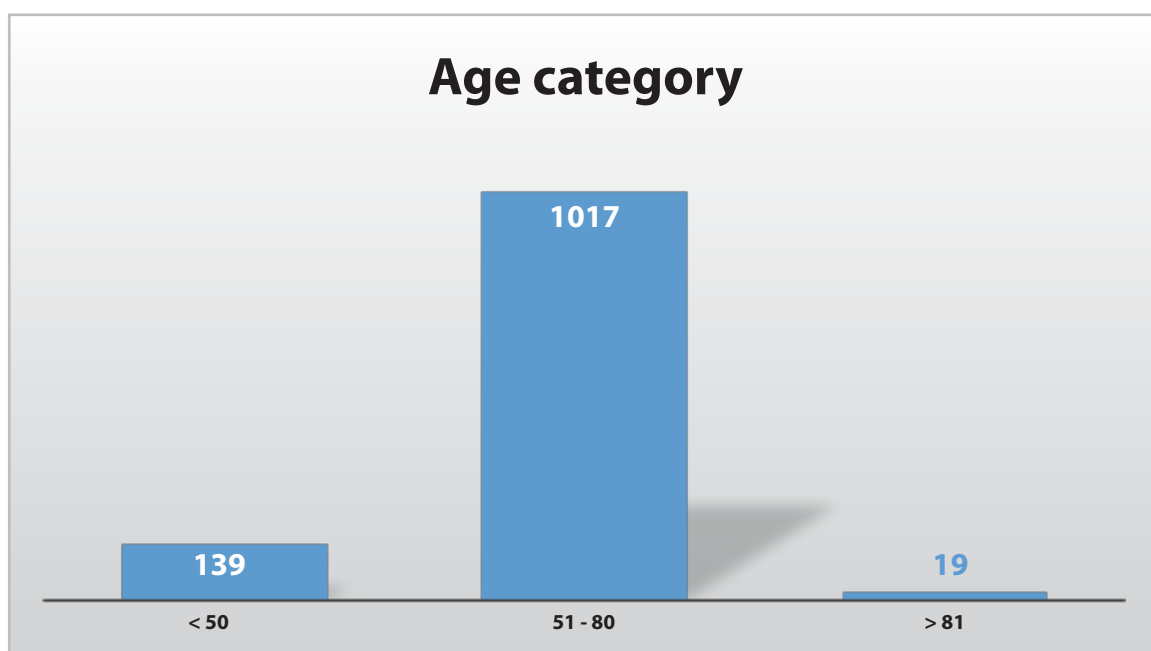


Primary Total Knee Arthroplasty

1st year

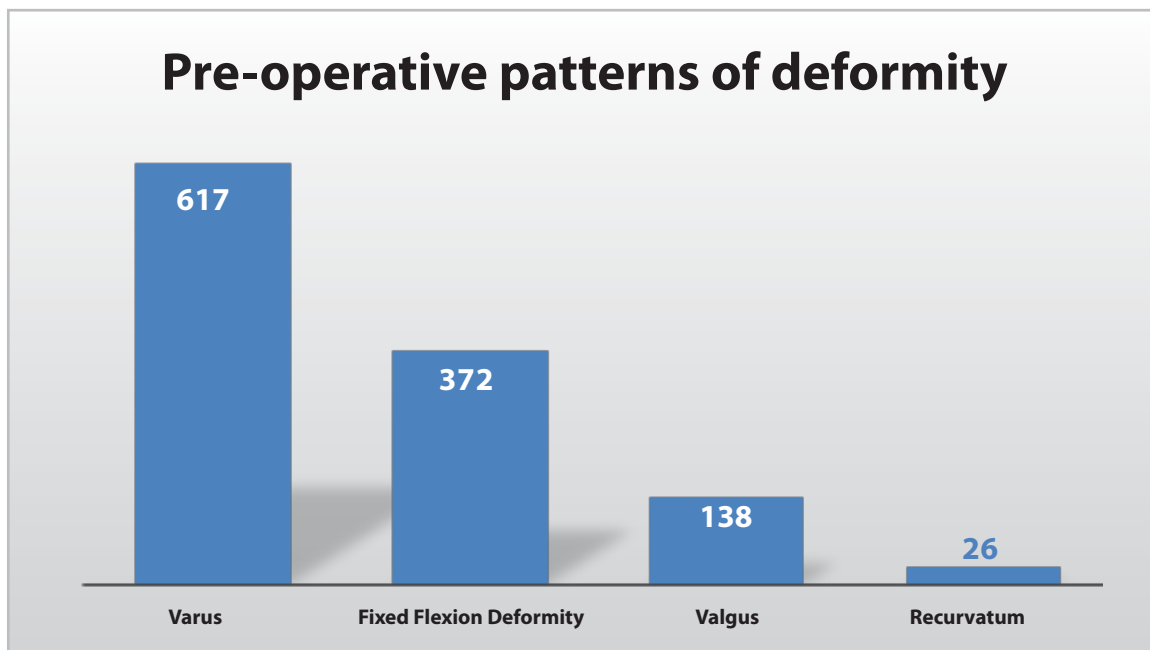


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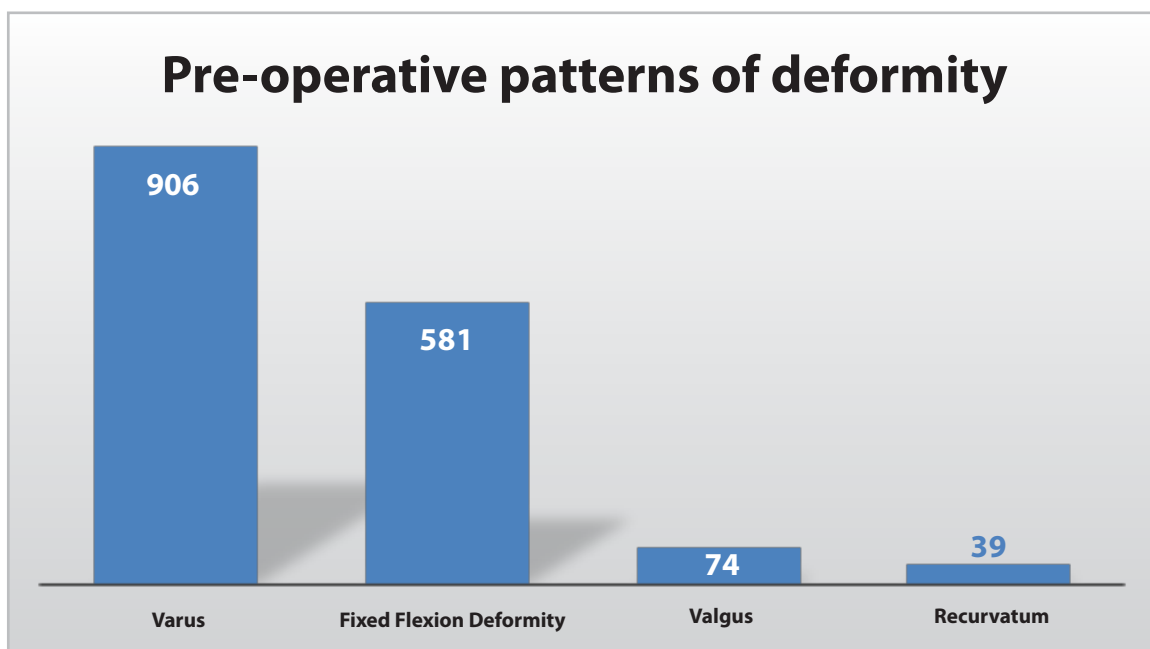


Primary Total Knee Arthroplasty

1st year

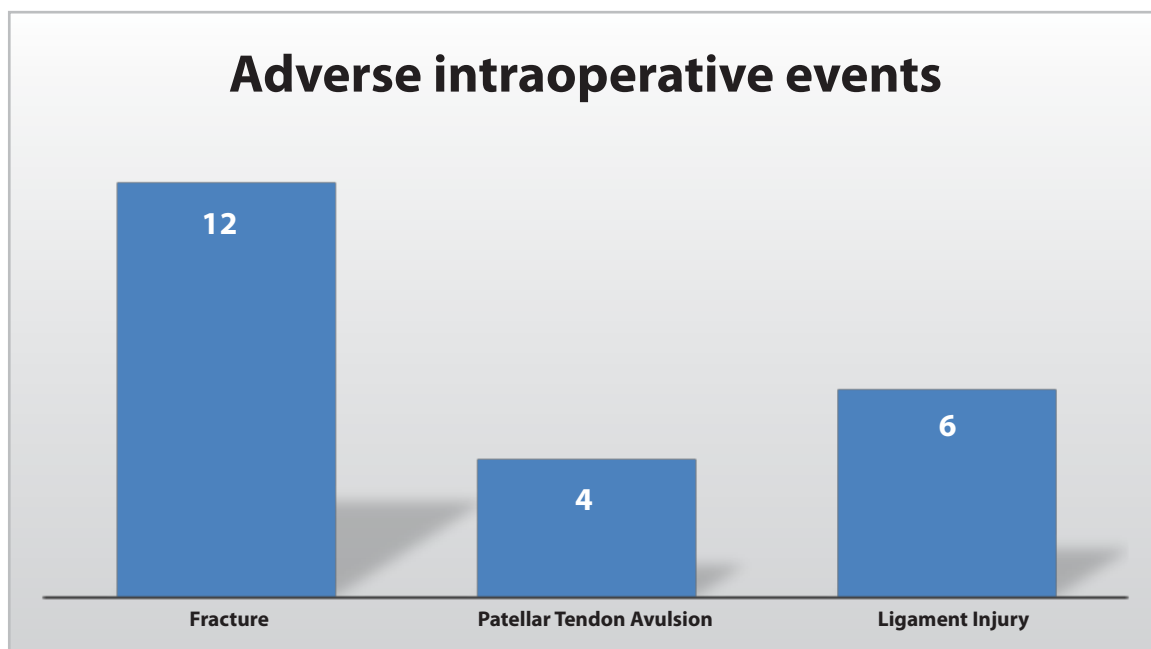


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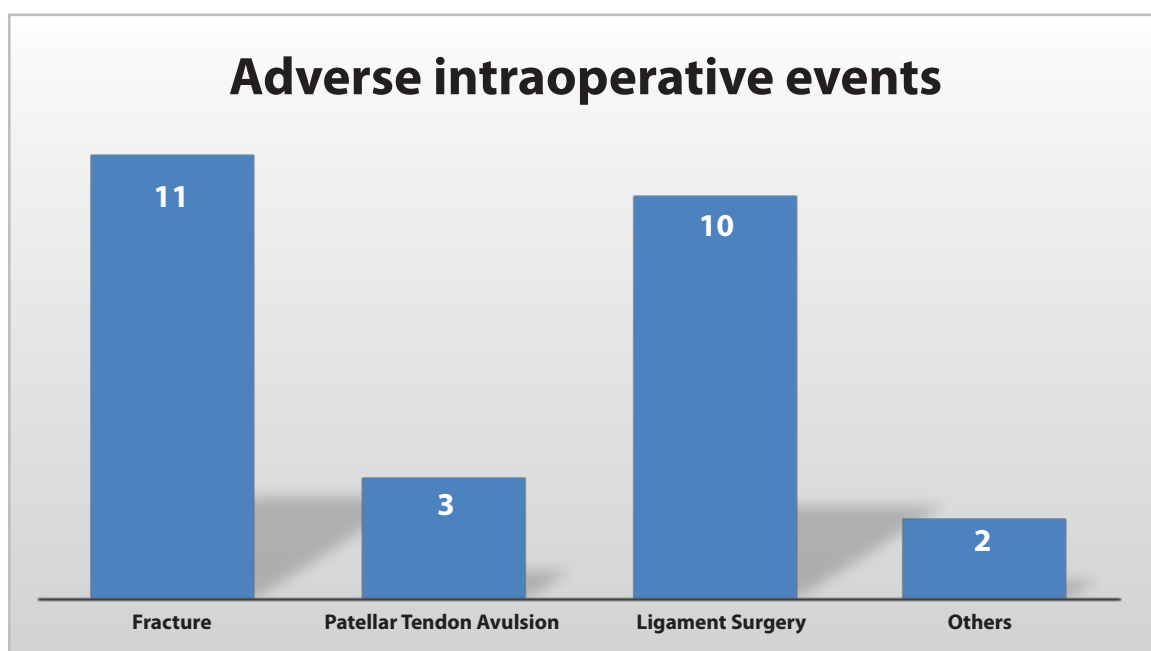


Primary Total Knee Arthroplasty

1st year



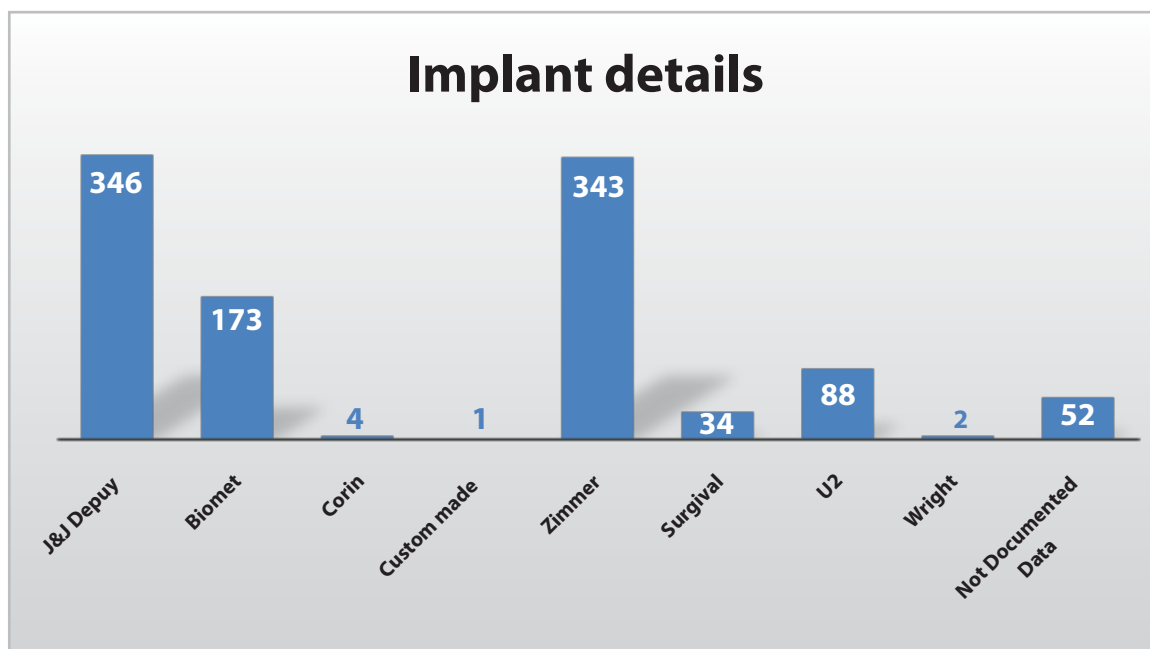
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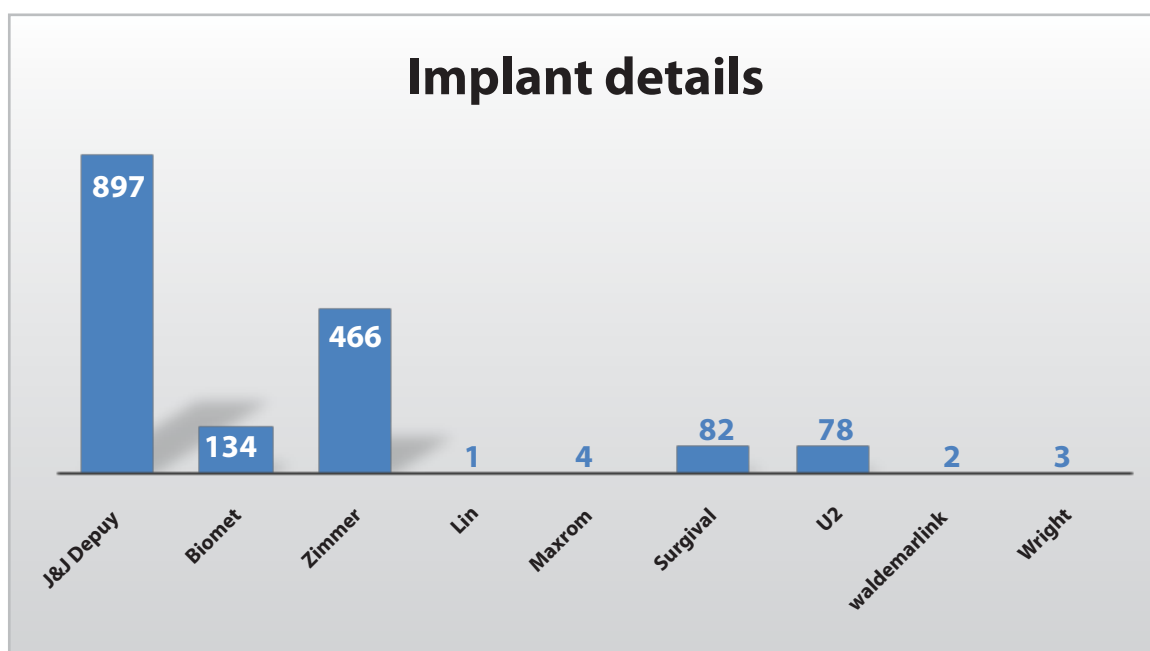
Section I

Primary Total Knee Arthroplasty

1st year

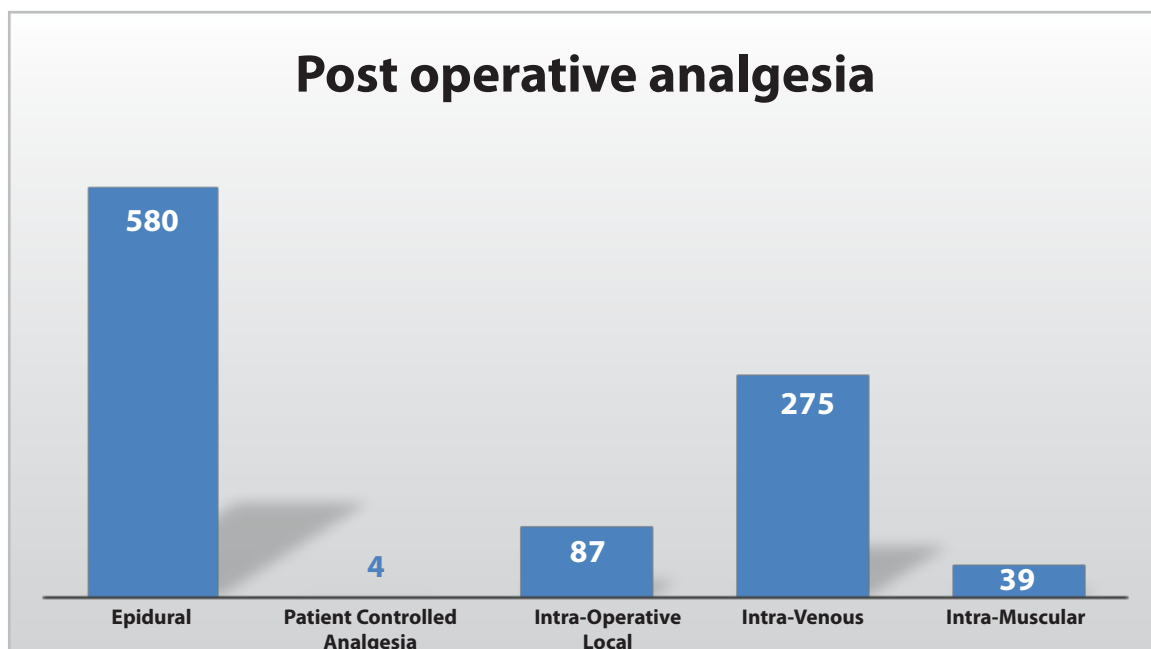


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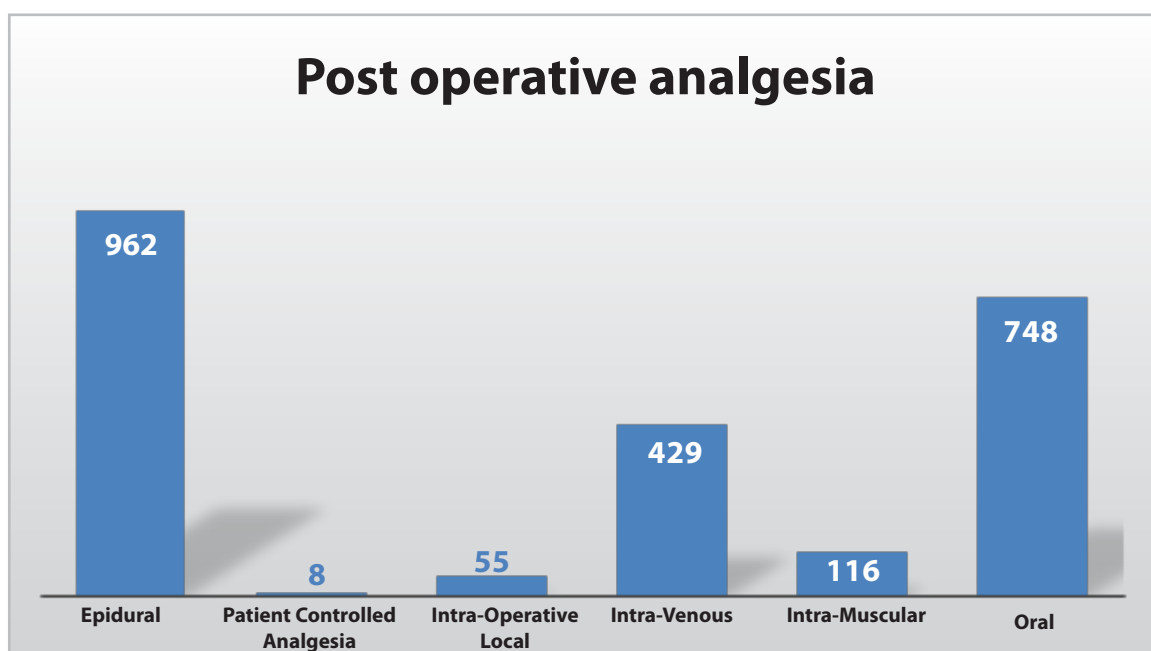


Primary Total Knee Arthroplasty

1st year



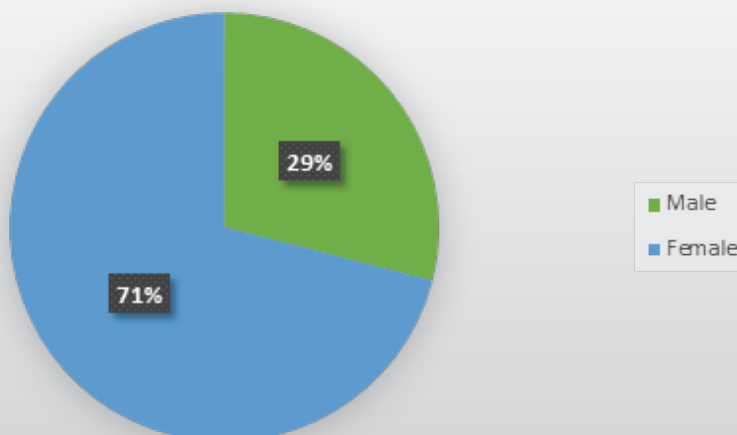
2nd year



Primary Total Knee Arthroplasty

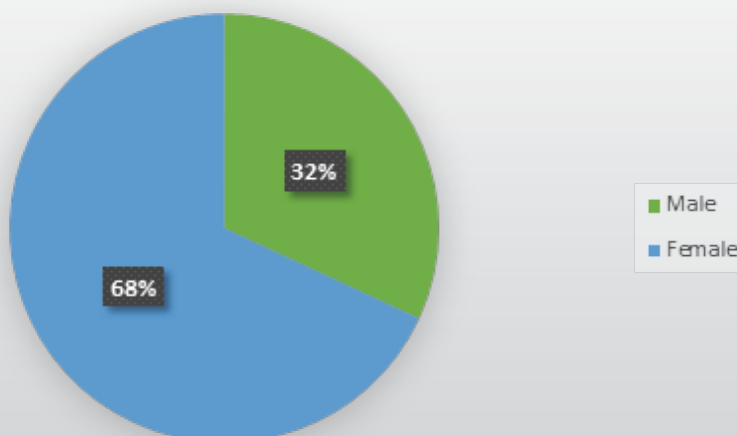
1st year

Gender Distribution



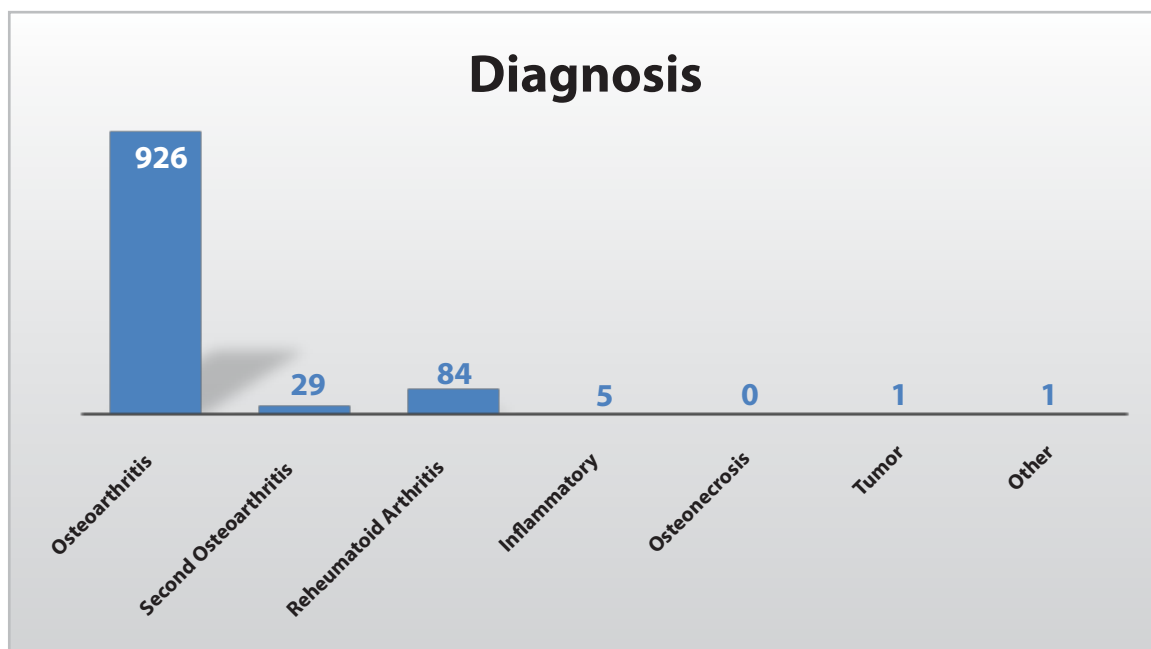
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Gender Distribution

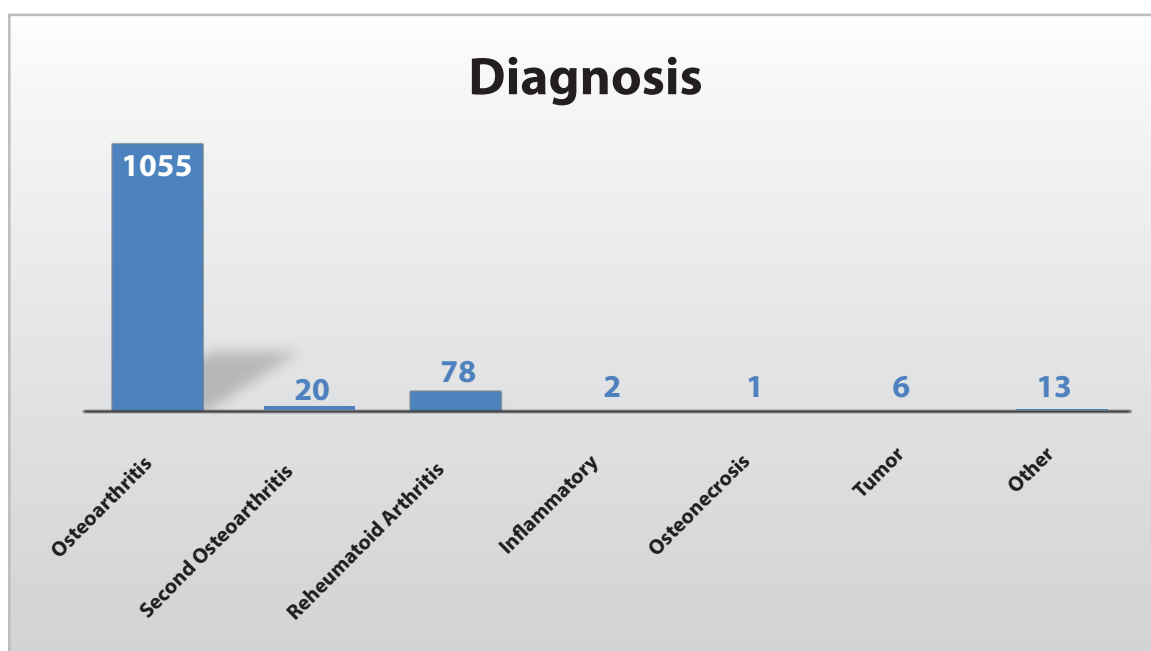


Primary Total Knee Arthroplasty

1st year

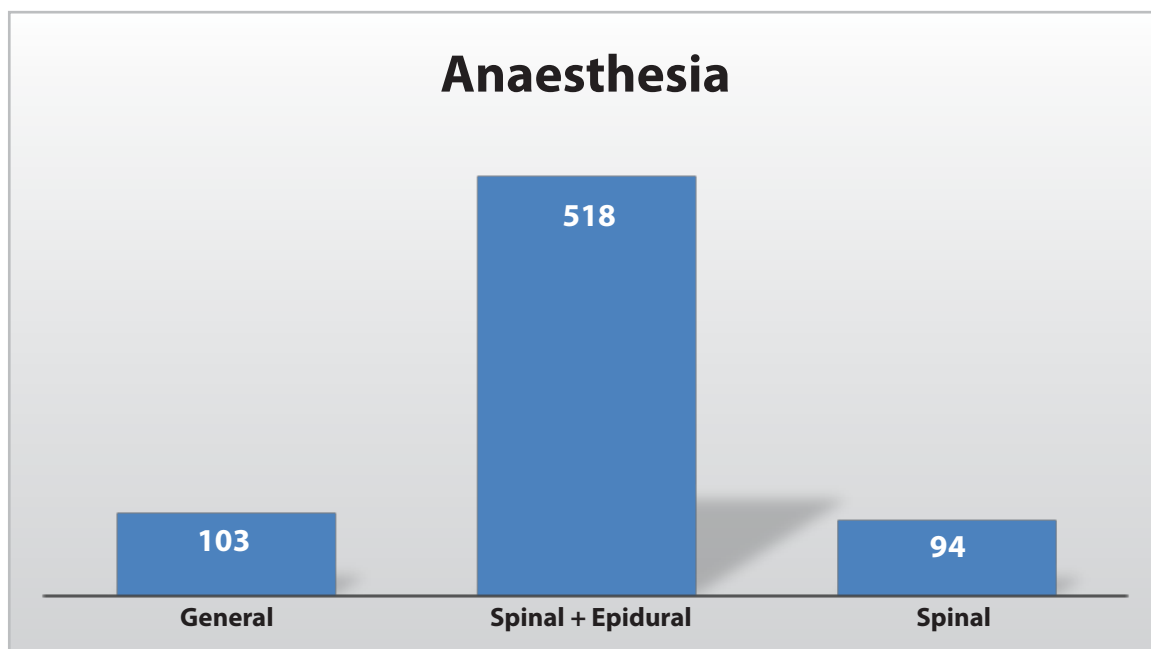


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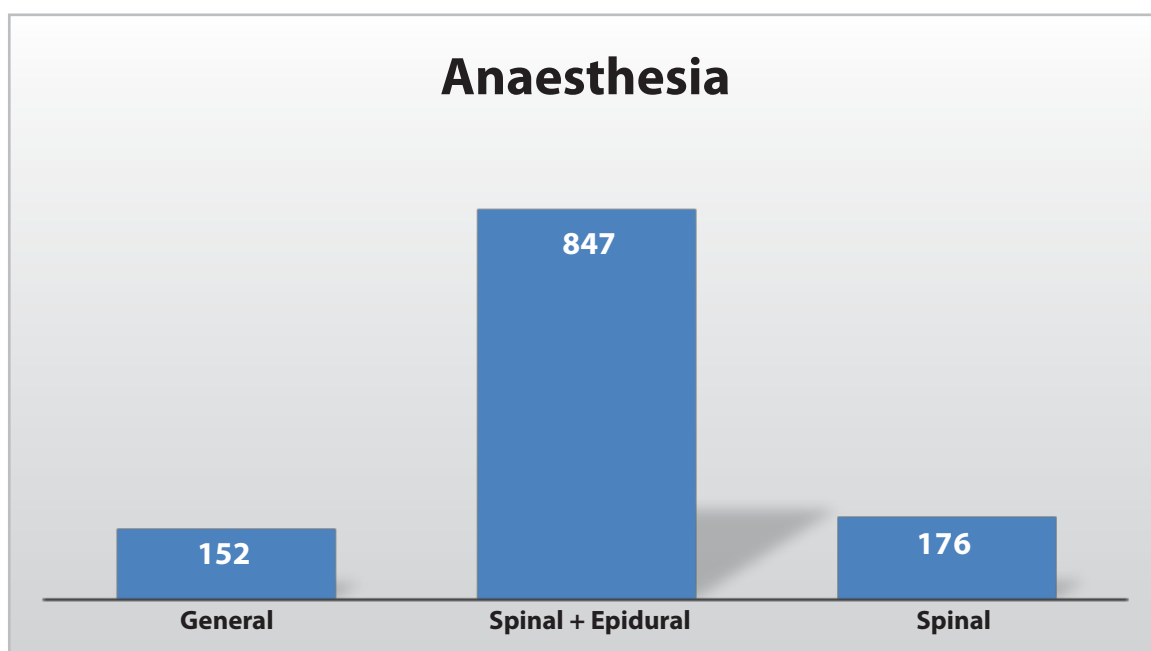


Primary Total Knee Arthroplasty

1st year



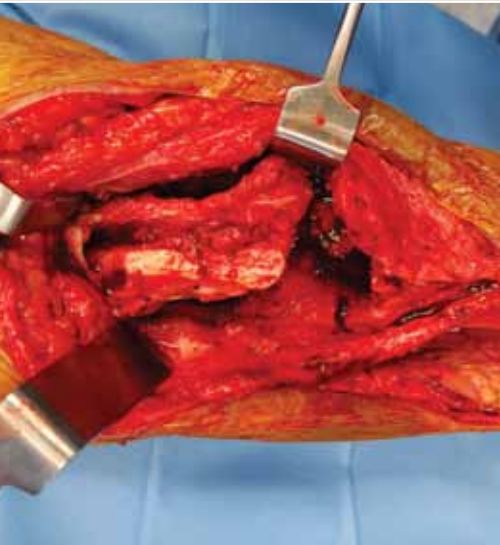
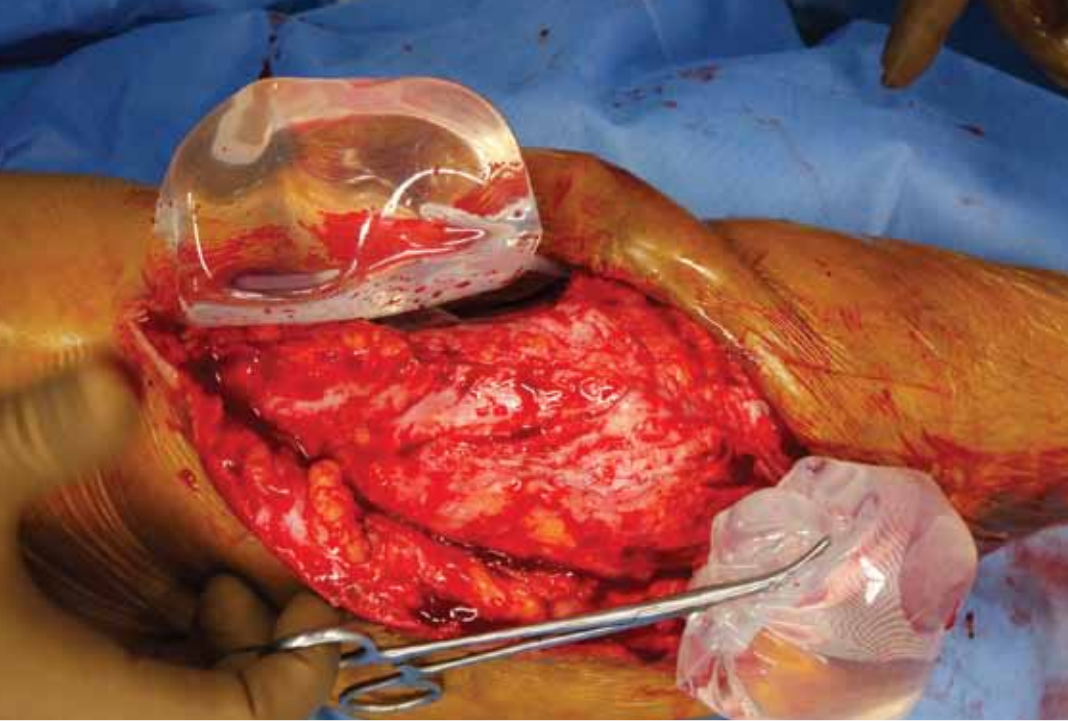
2nd year



Revision Total Knee Arthroplasty

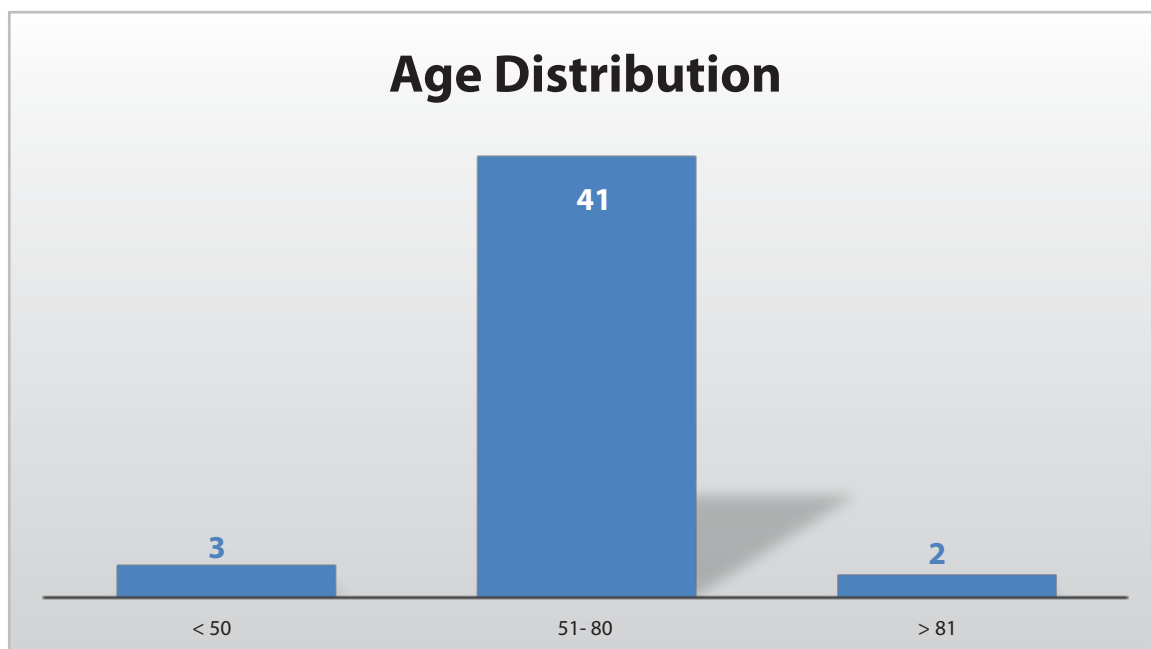
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II

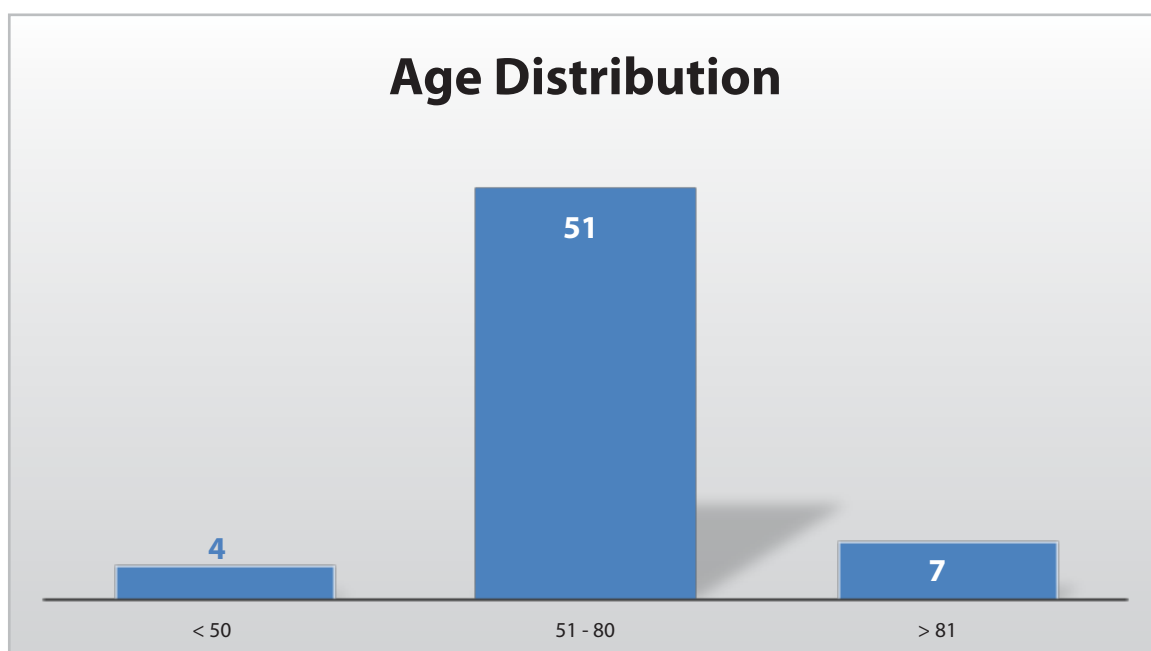


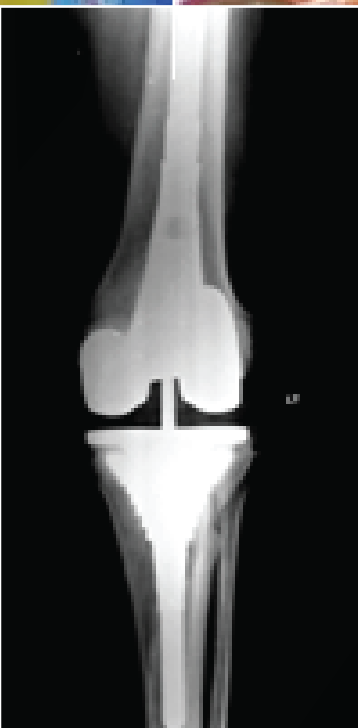
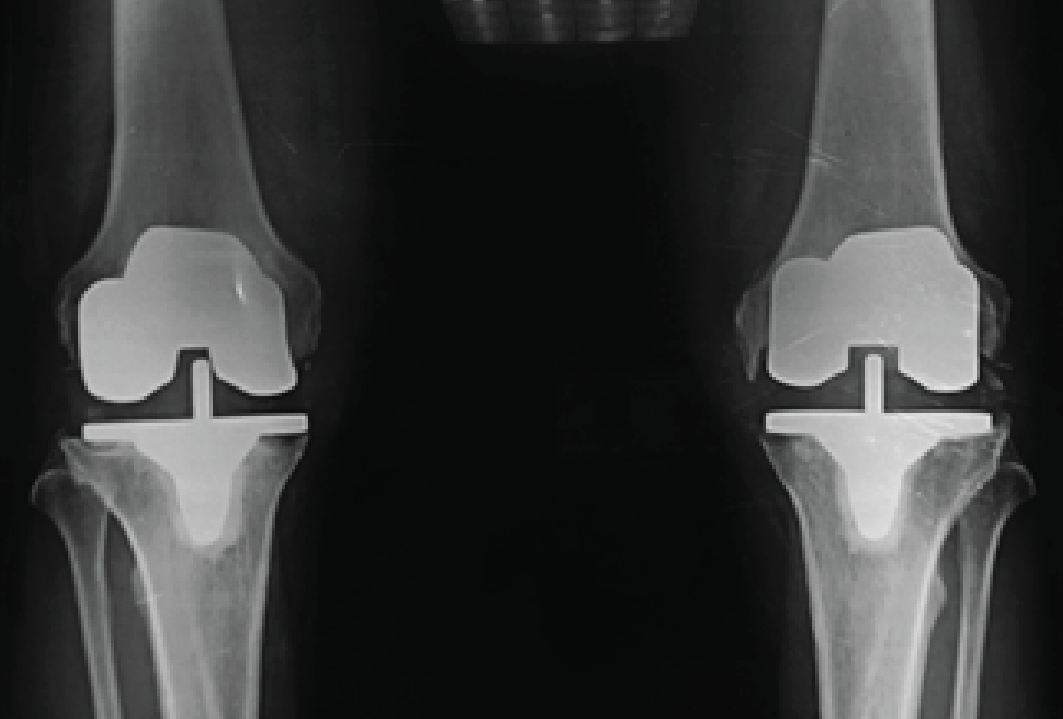
Revision Total Knee Arthroplasty

1st year



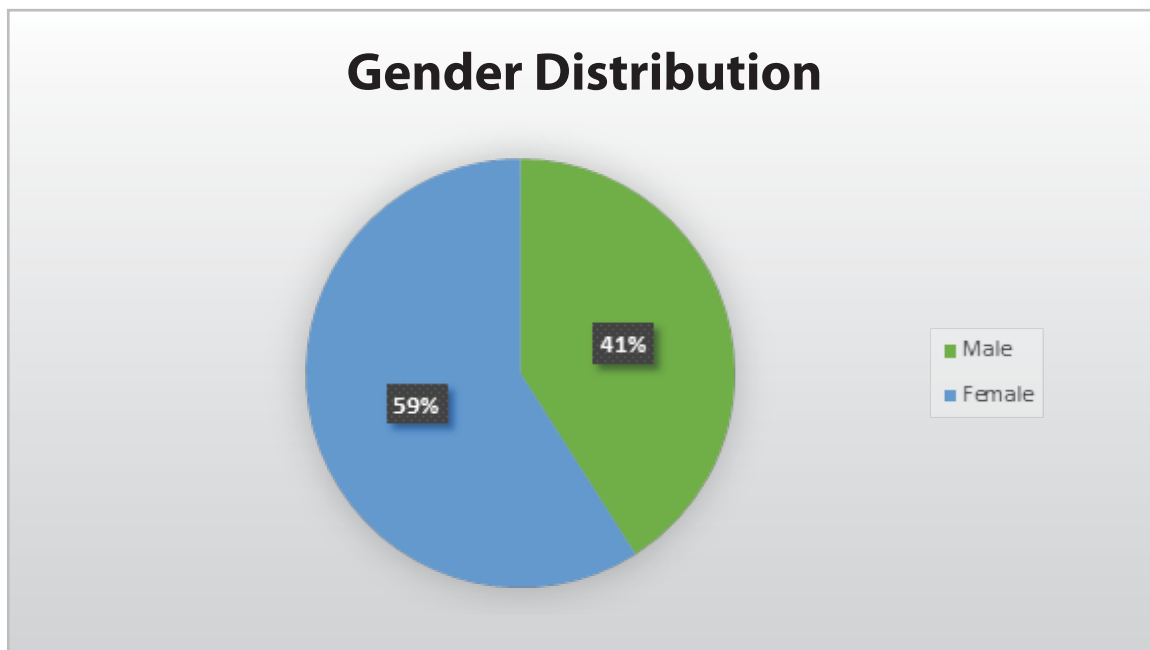
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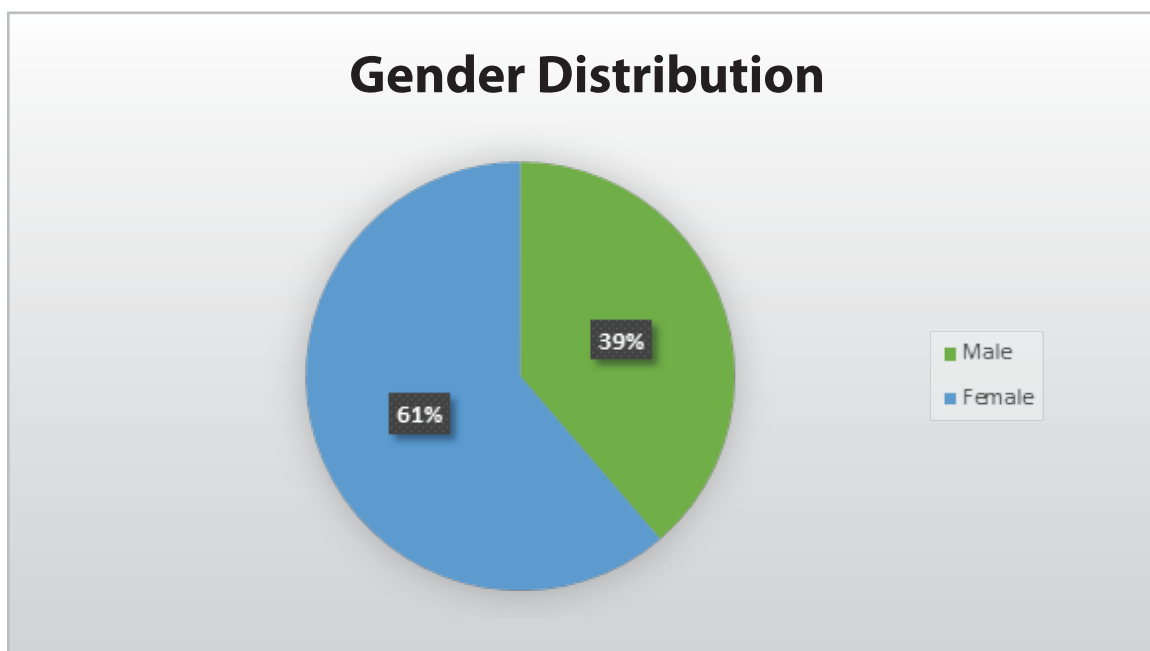


Revision Total Knee Arthroplasty

1st year

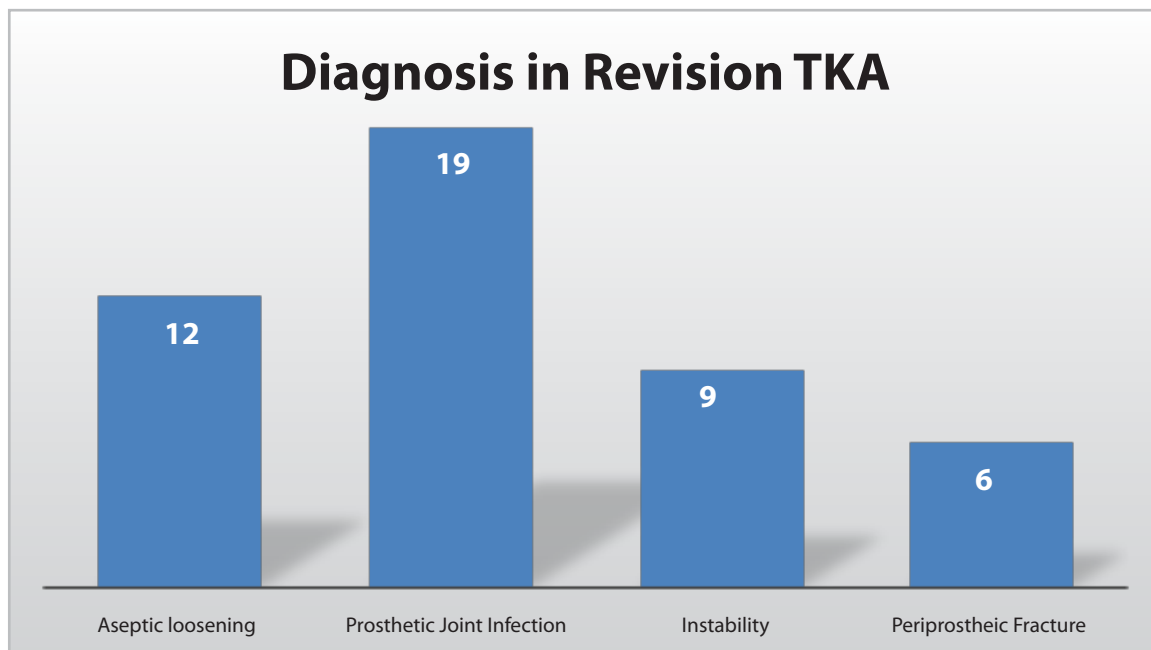


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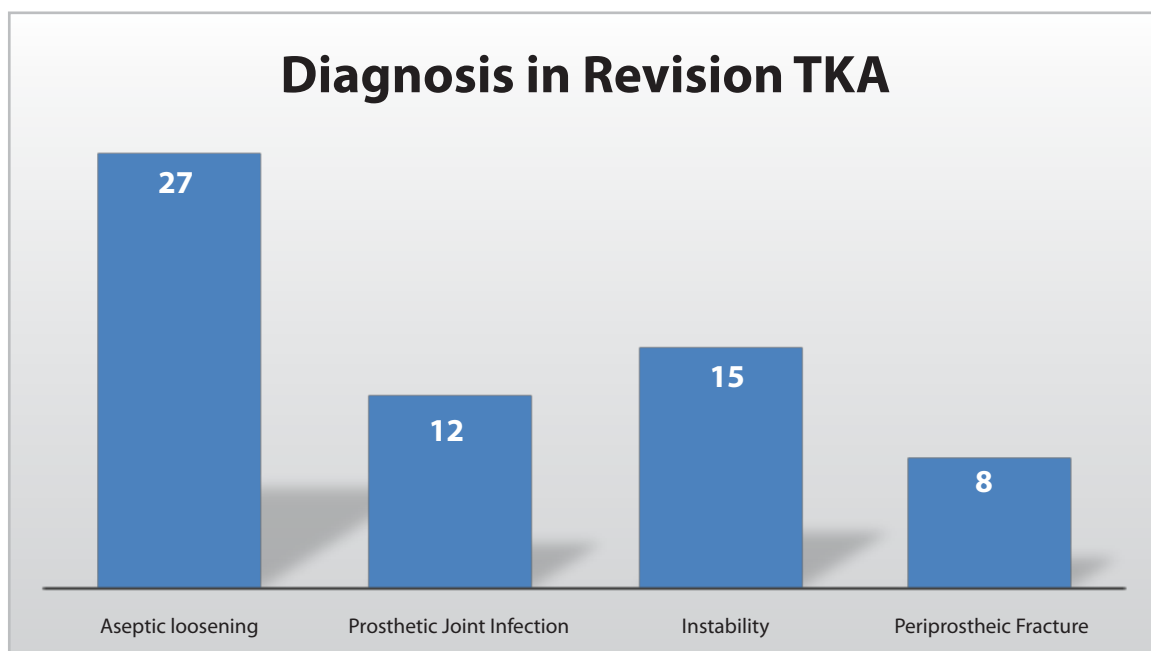


Revision Total Knee Arthroplasty

1st year

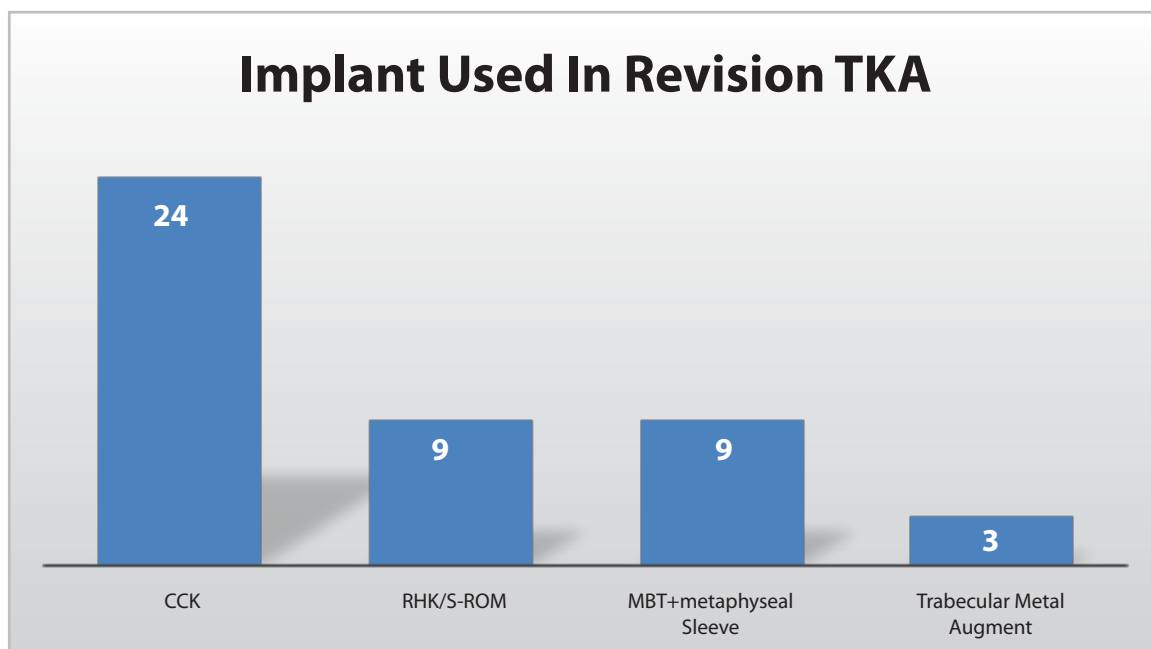


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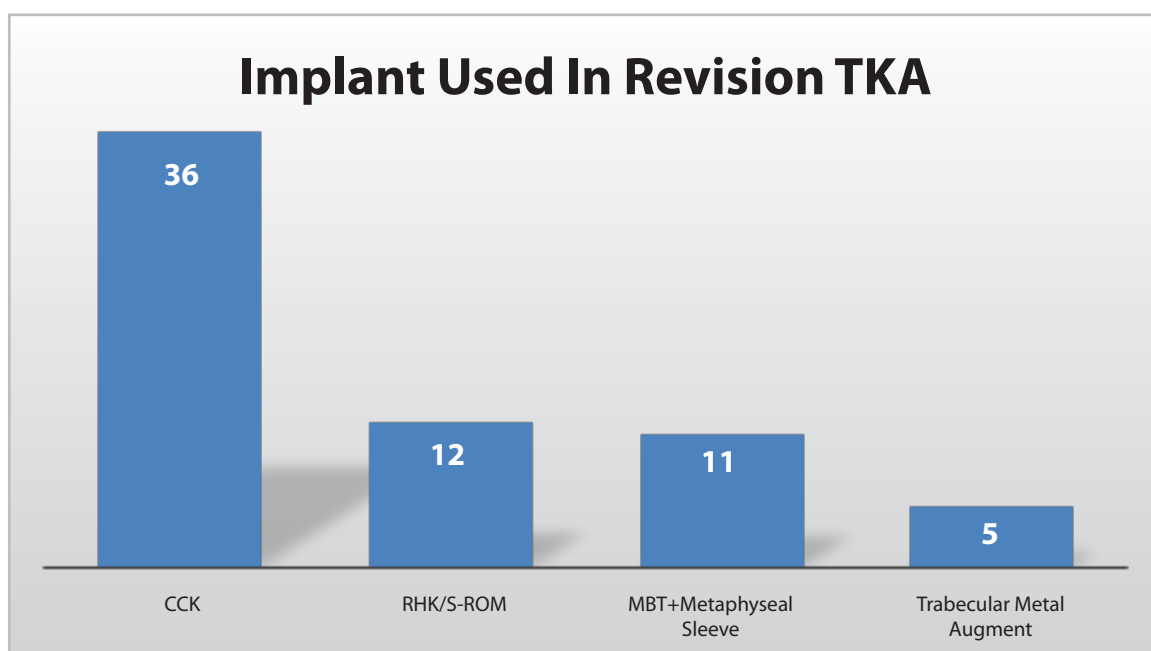


Revision Total Knee Arthroplasty

1st year



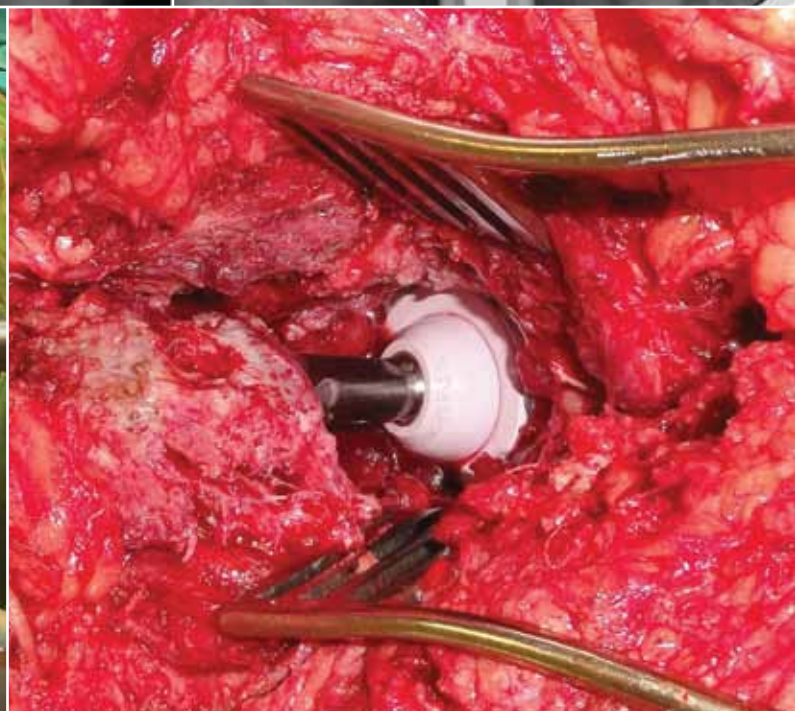
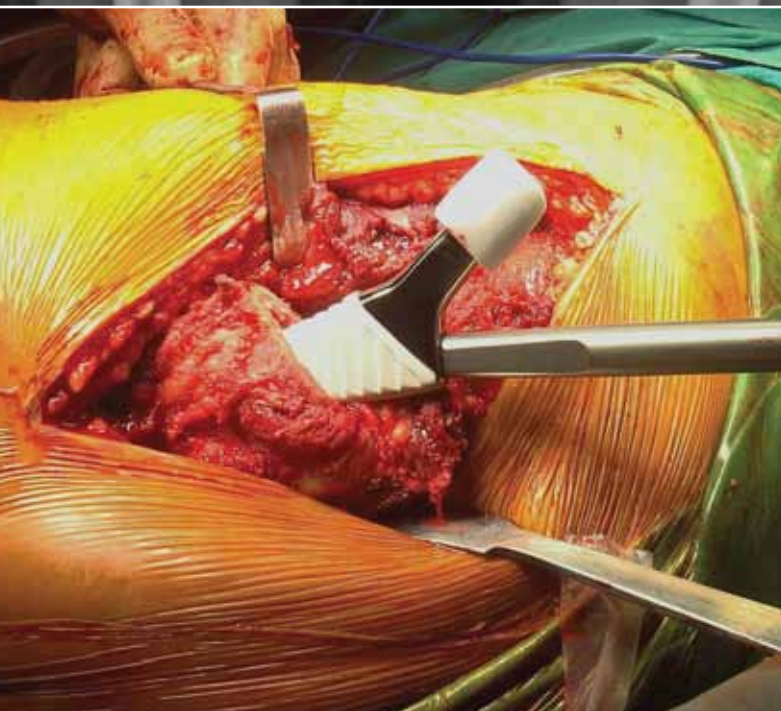
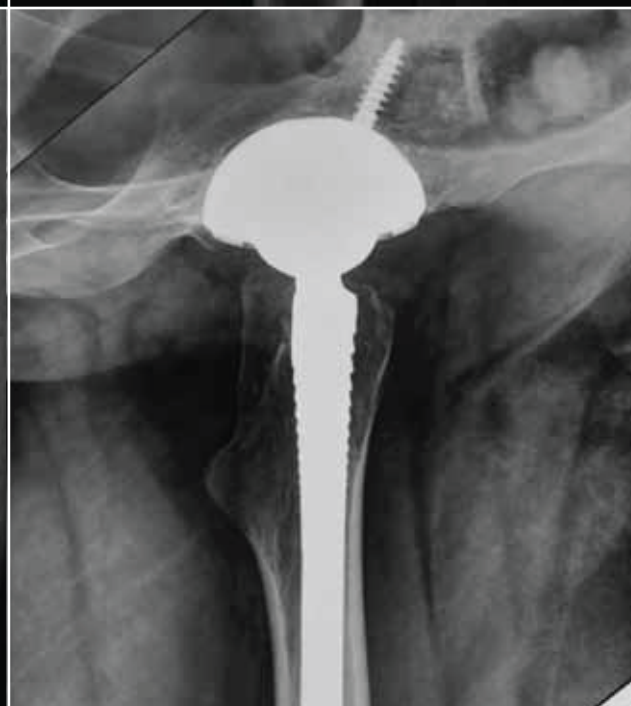
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Primary Total Hip Arthroplasty

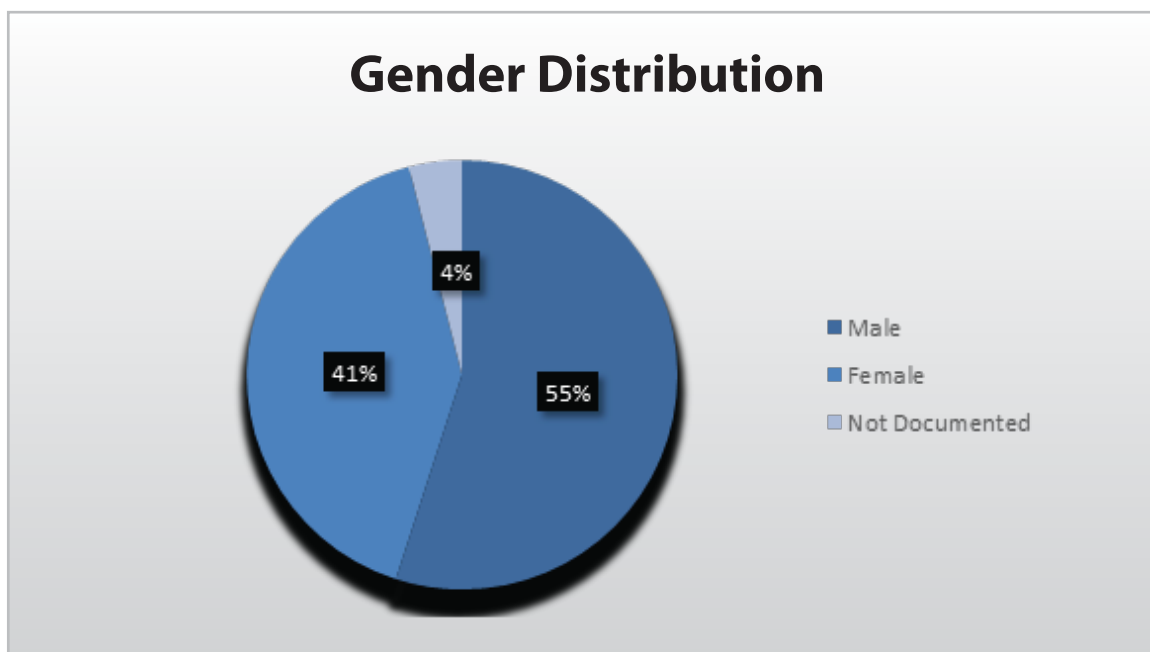
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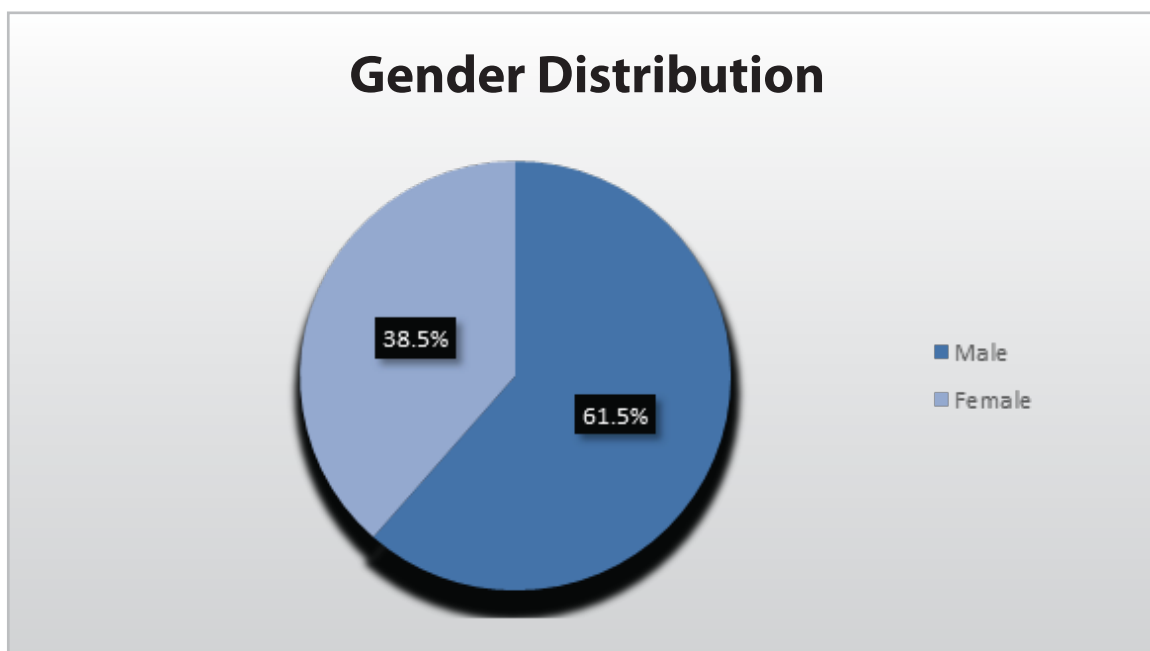


Primary Total Hip Arthroplasty

1st year

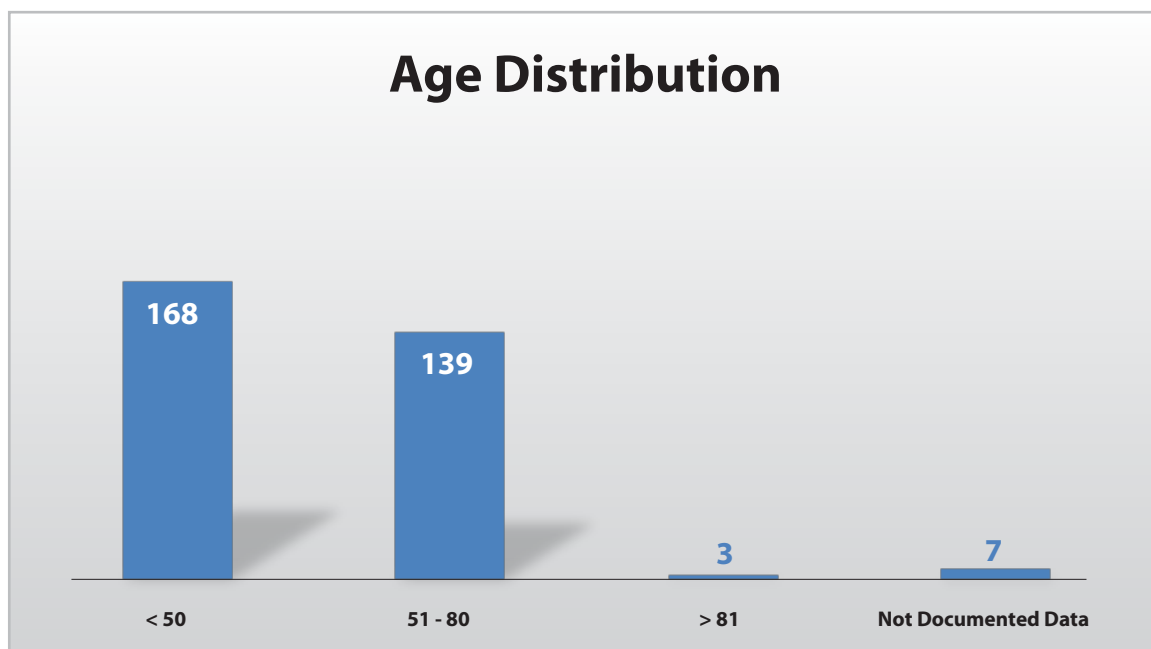


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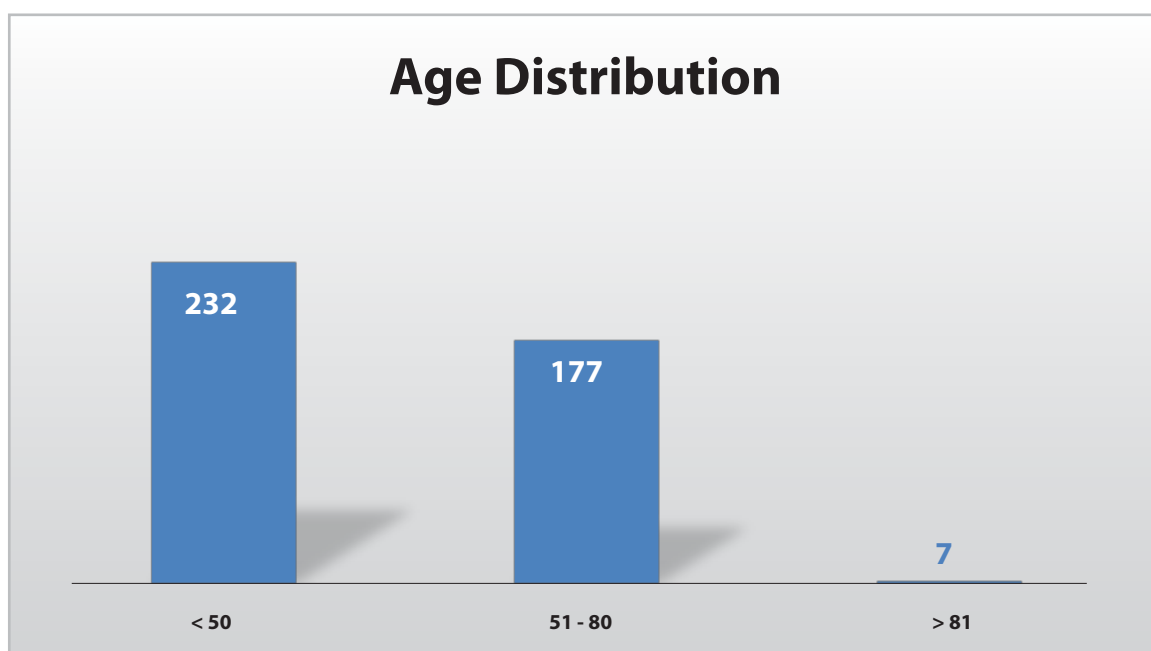


Primary Total Hip Arthroplasty

1st year

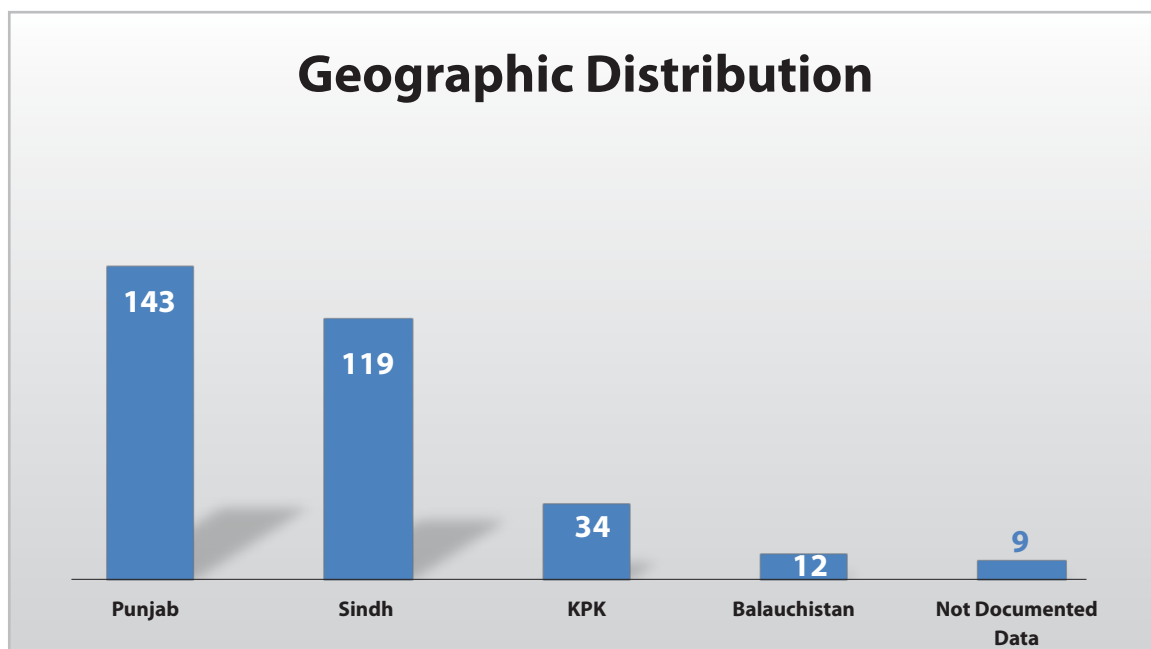


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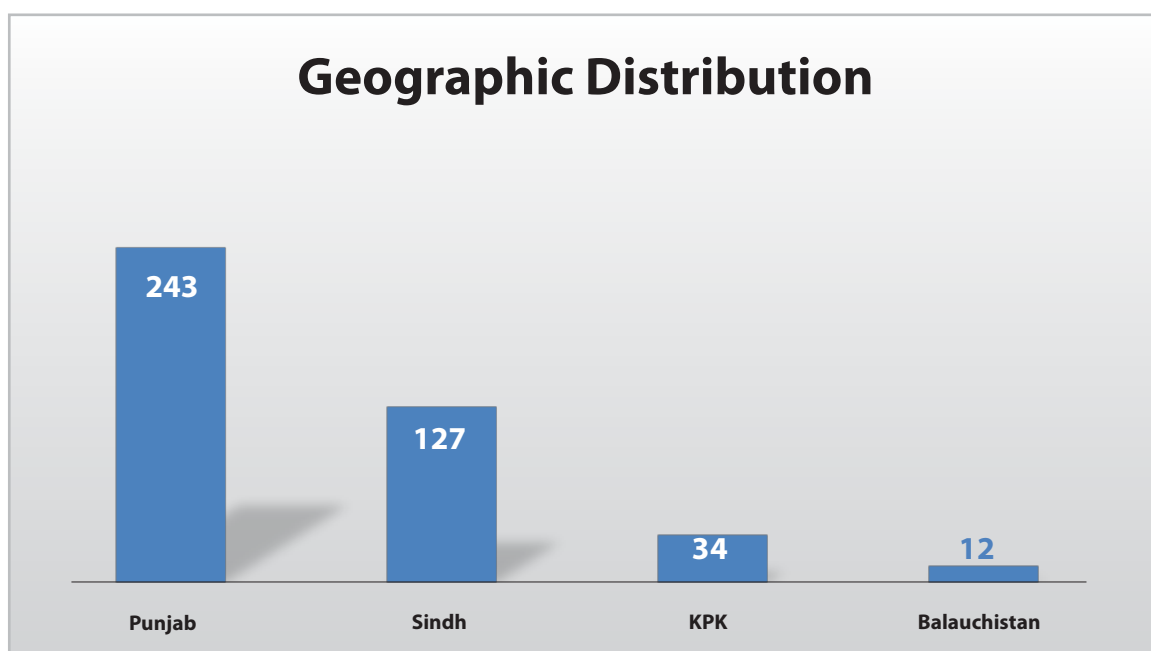


Primary Total Hip Arthroplasty

1st year

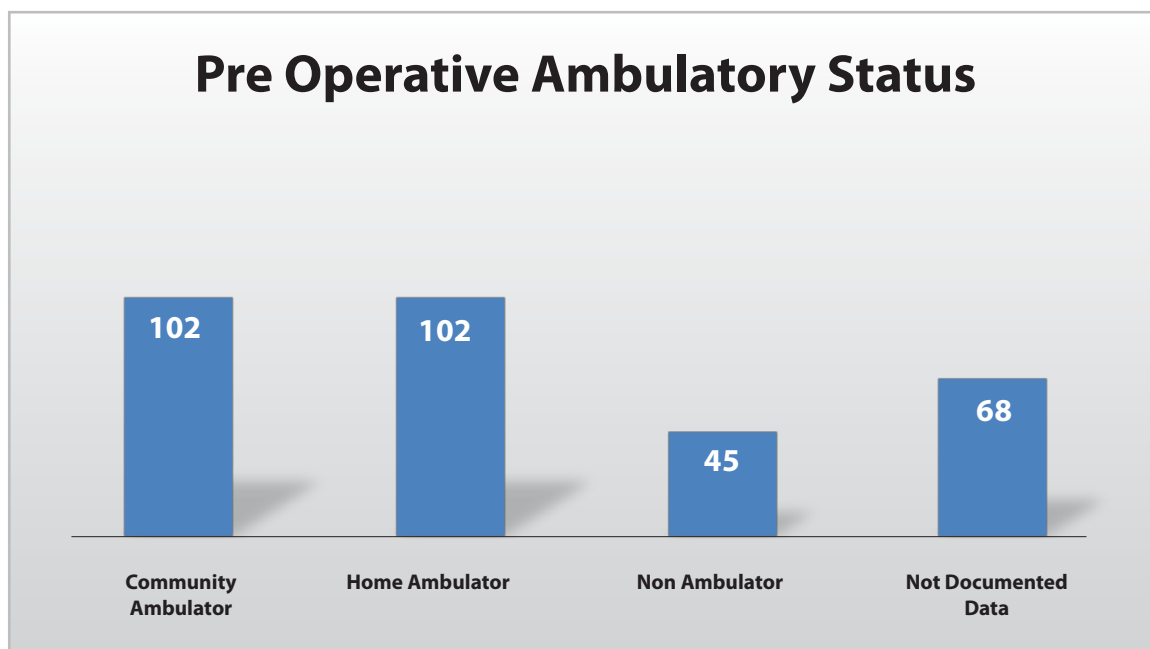


2nd year

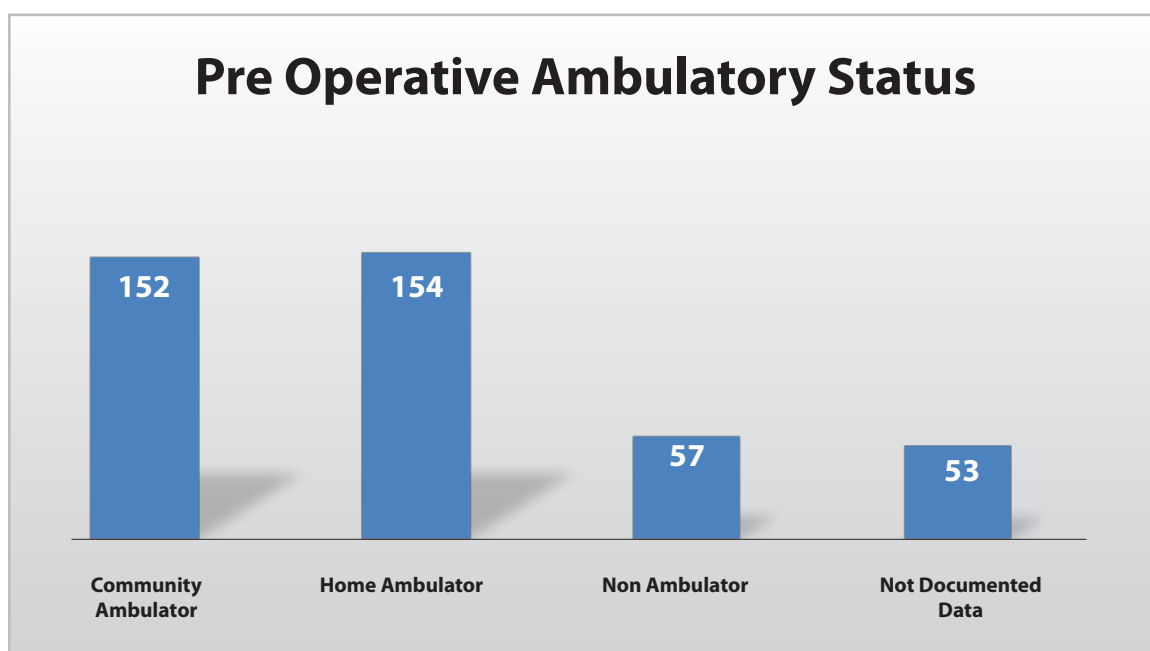


Primary Total Hip Arthroplasty

1st year

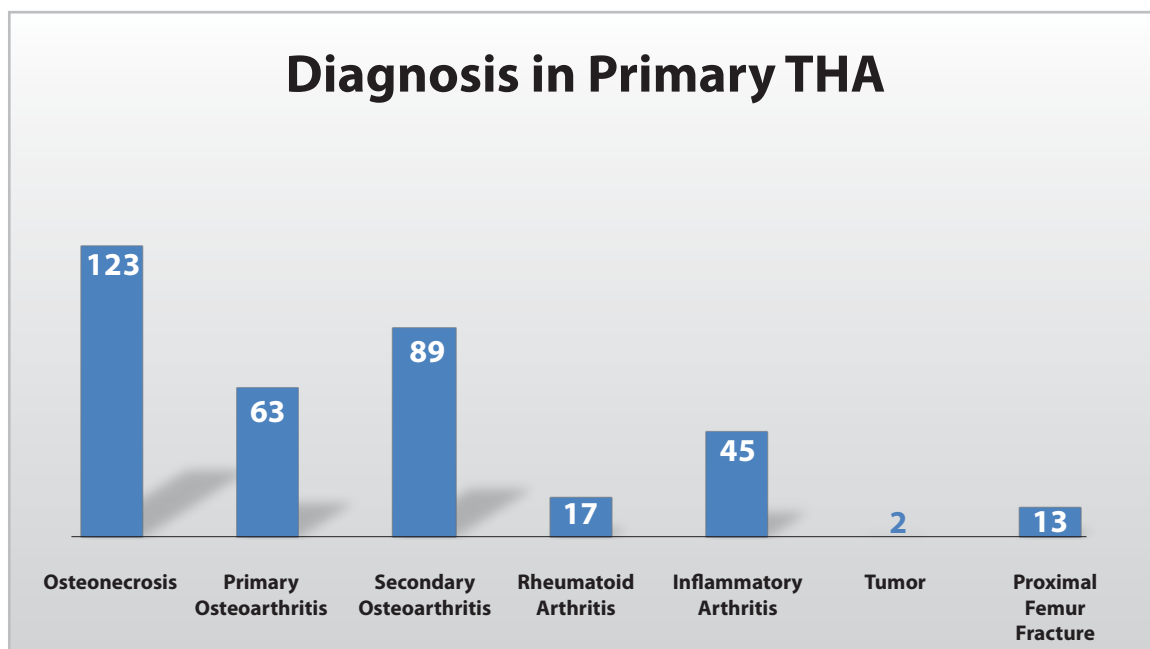


2nd year

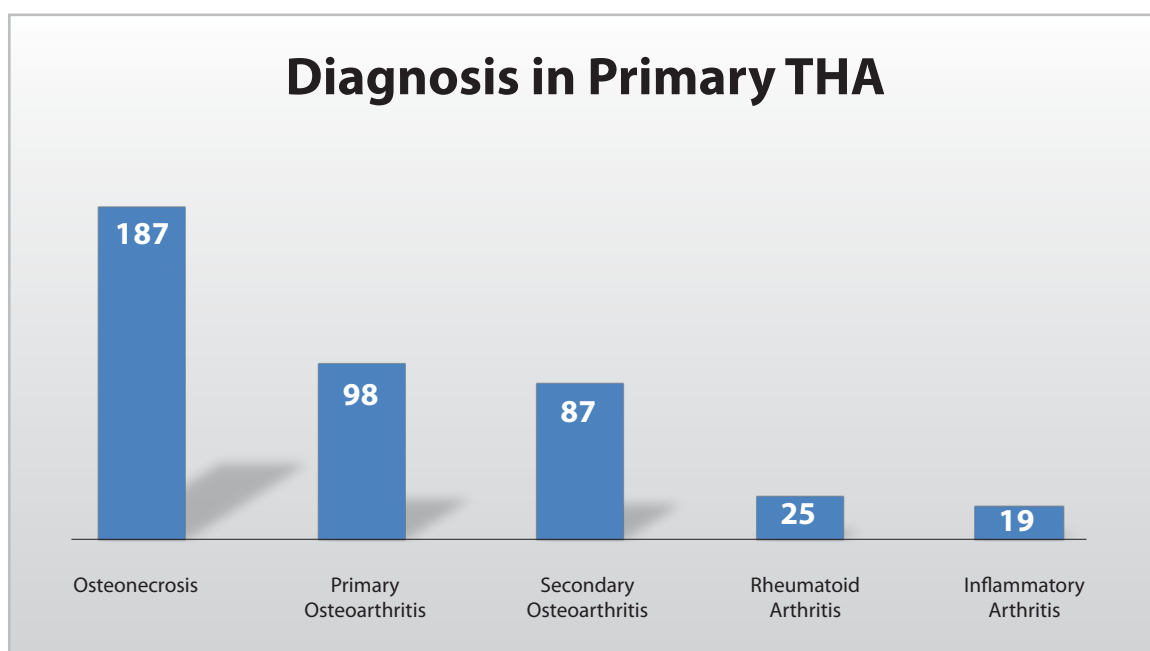


Primary Total Hip Arthroplasty

1st year

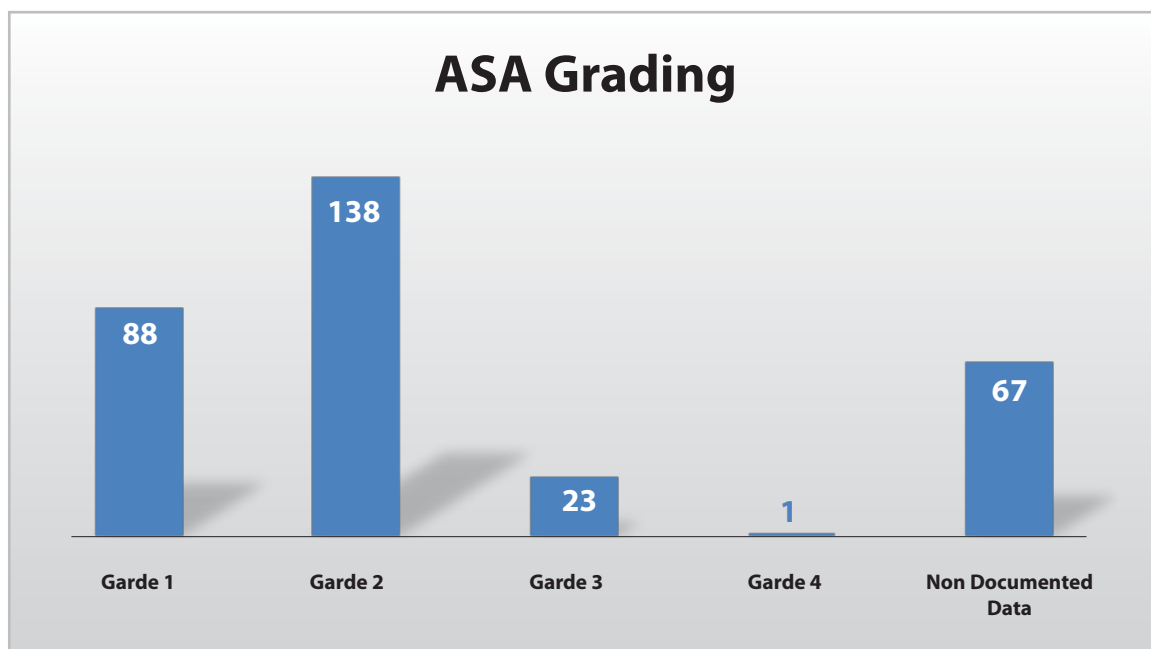


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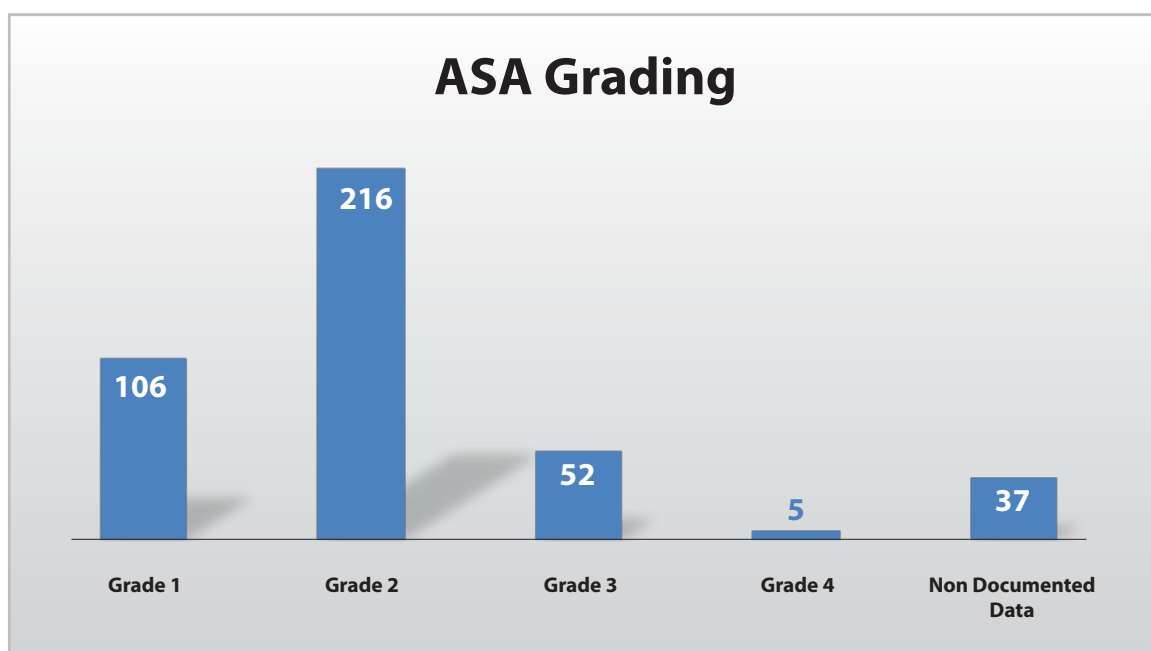


Primary Total Hip Arthroplasty

1st year

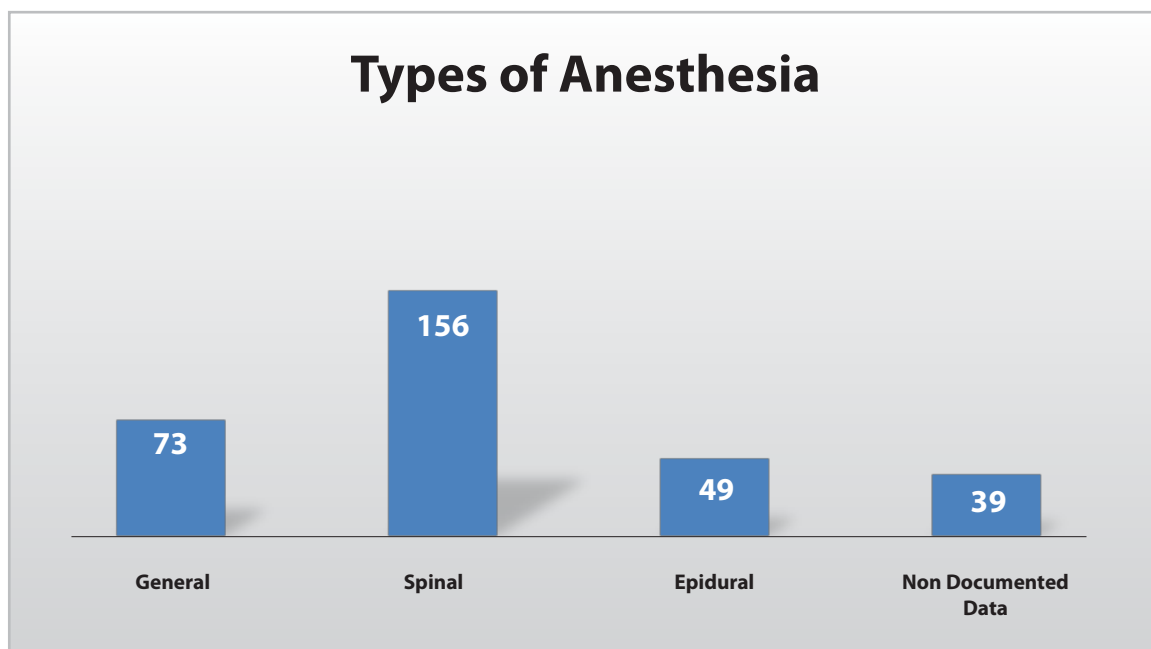


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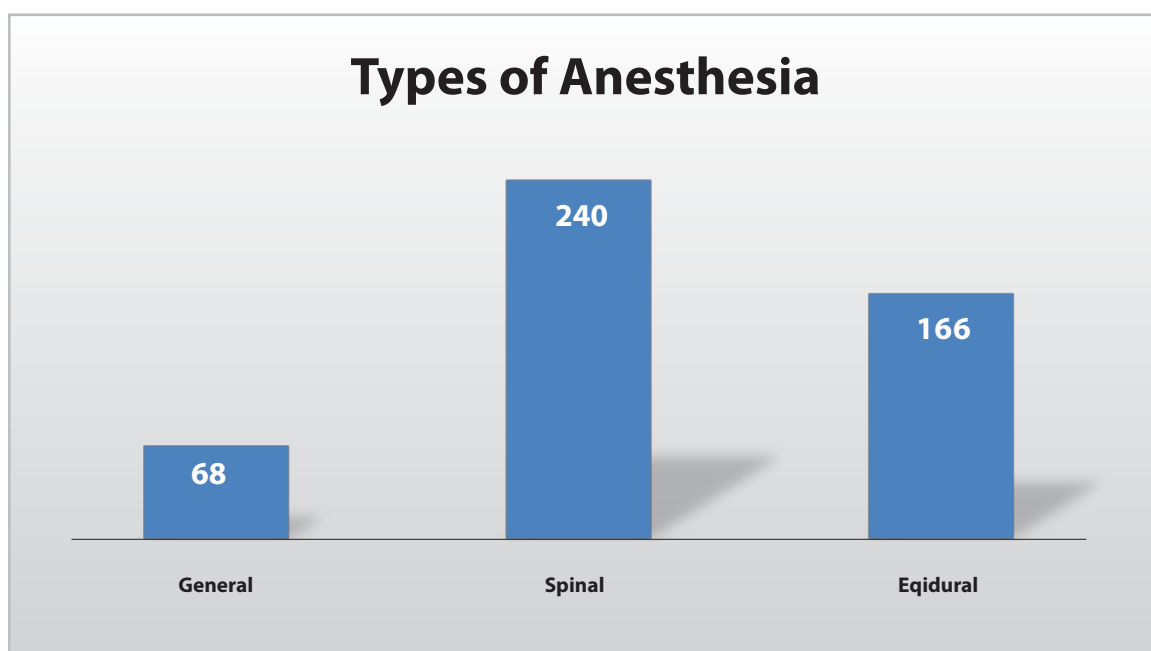


Primary Total Hip Arthroplasty

1st year

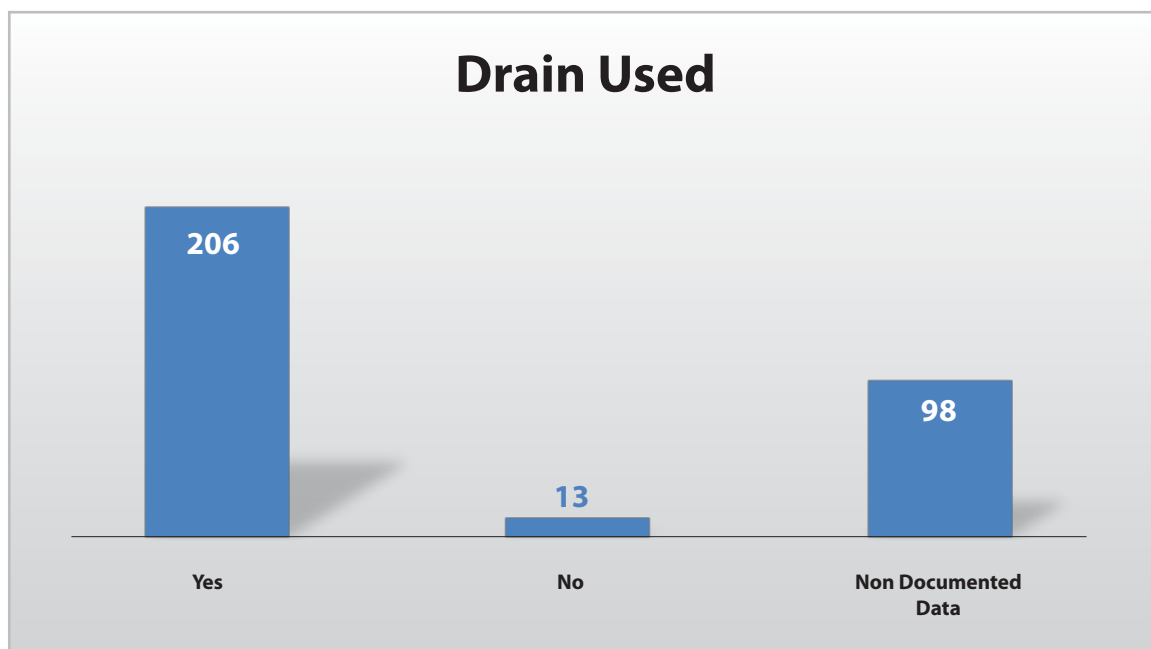


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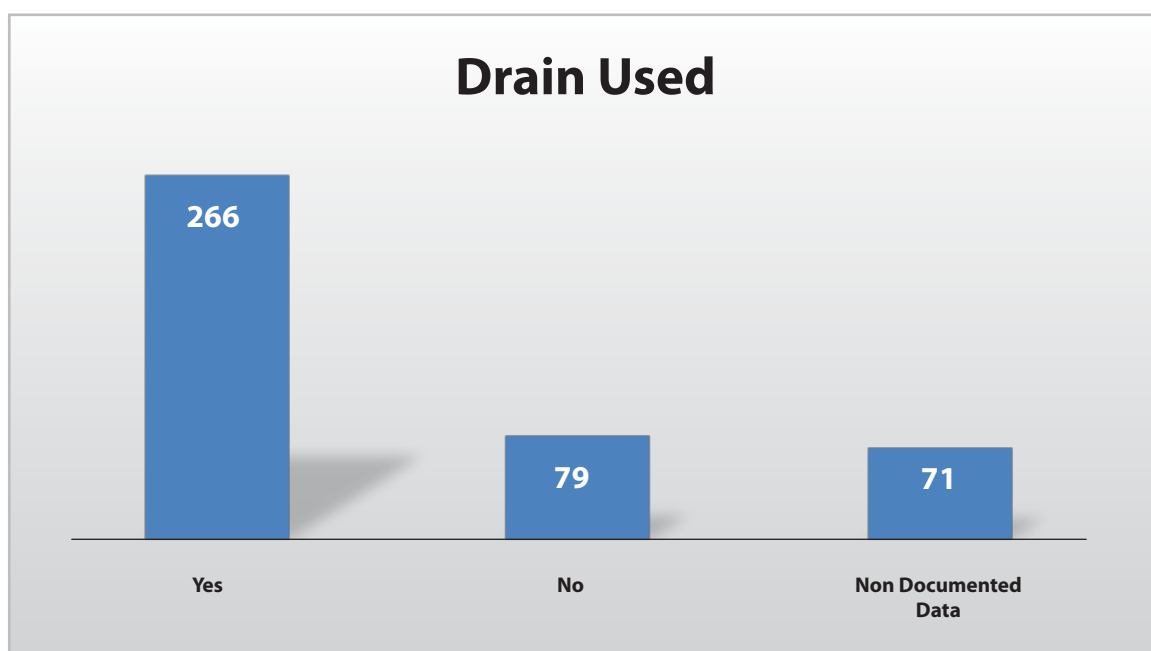


Primary Total Hip Arthroplasty

1st year

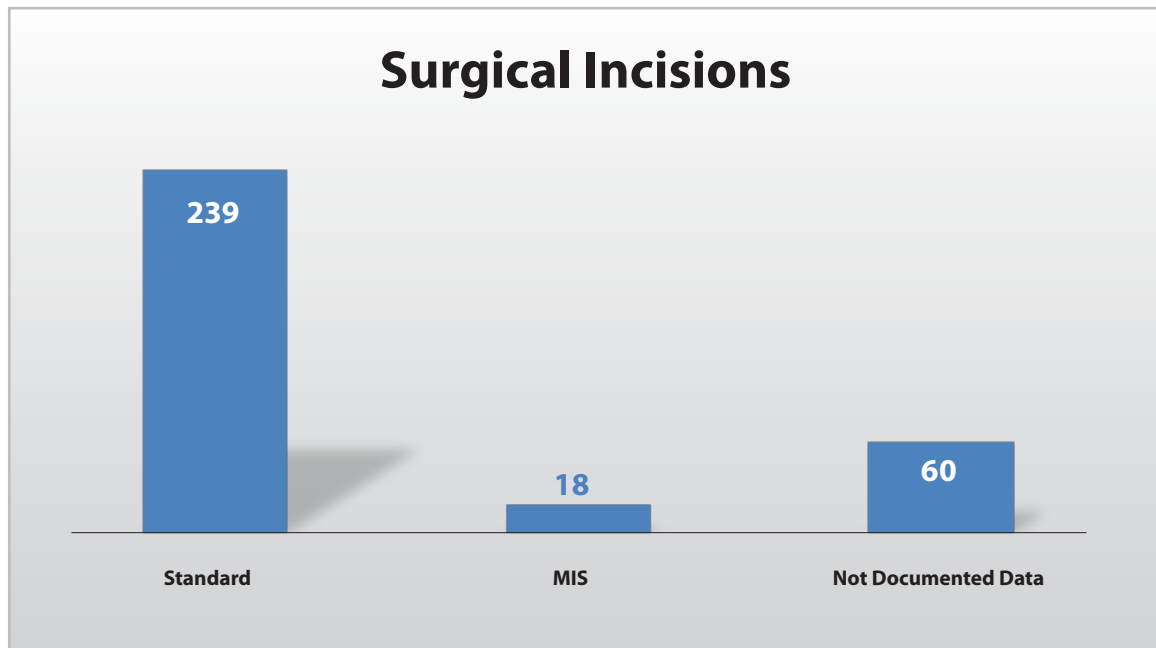


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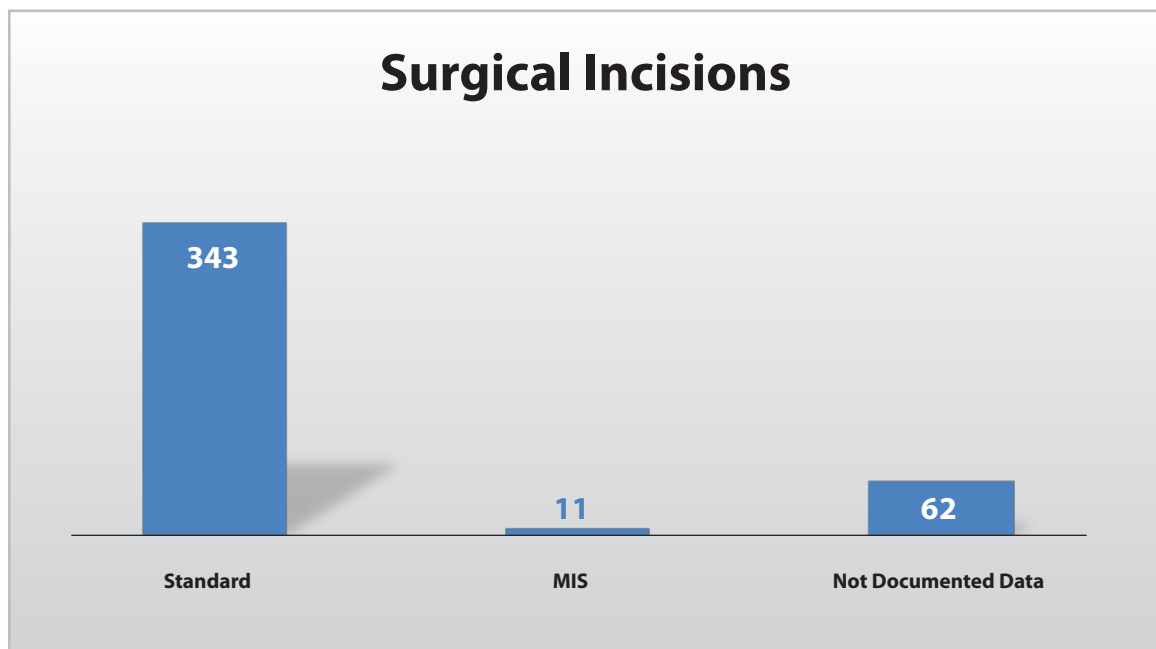


Primary Total Hip Arthroplasty

1st year

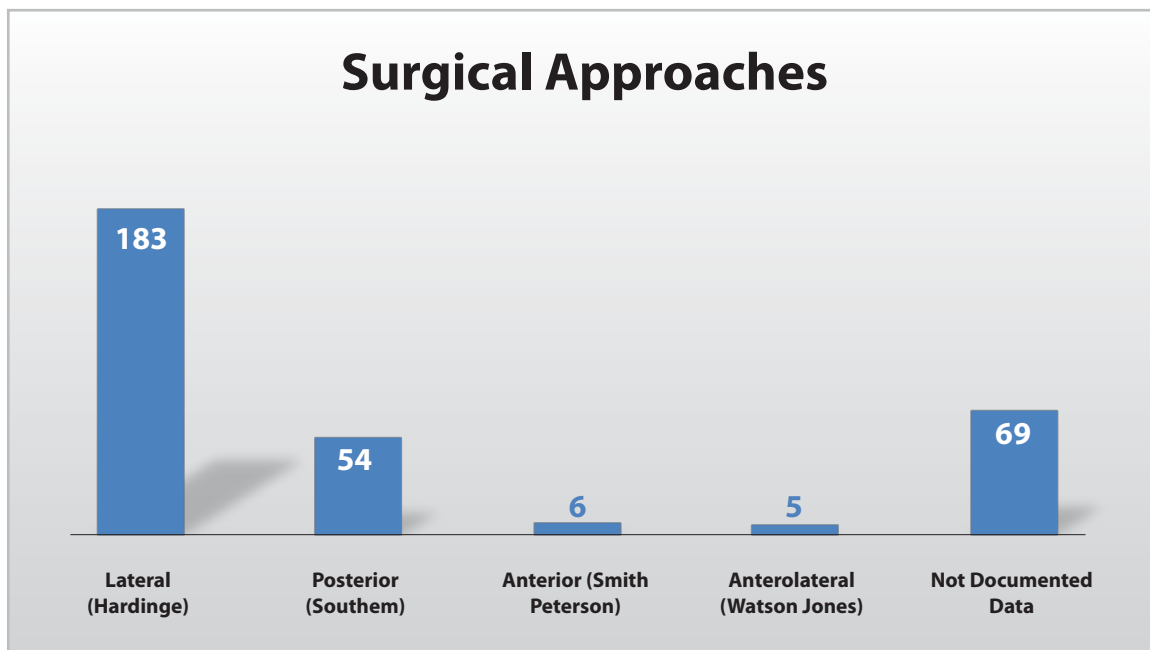


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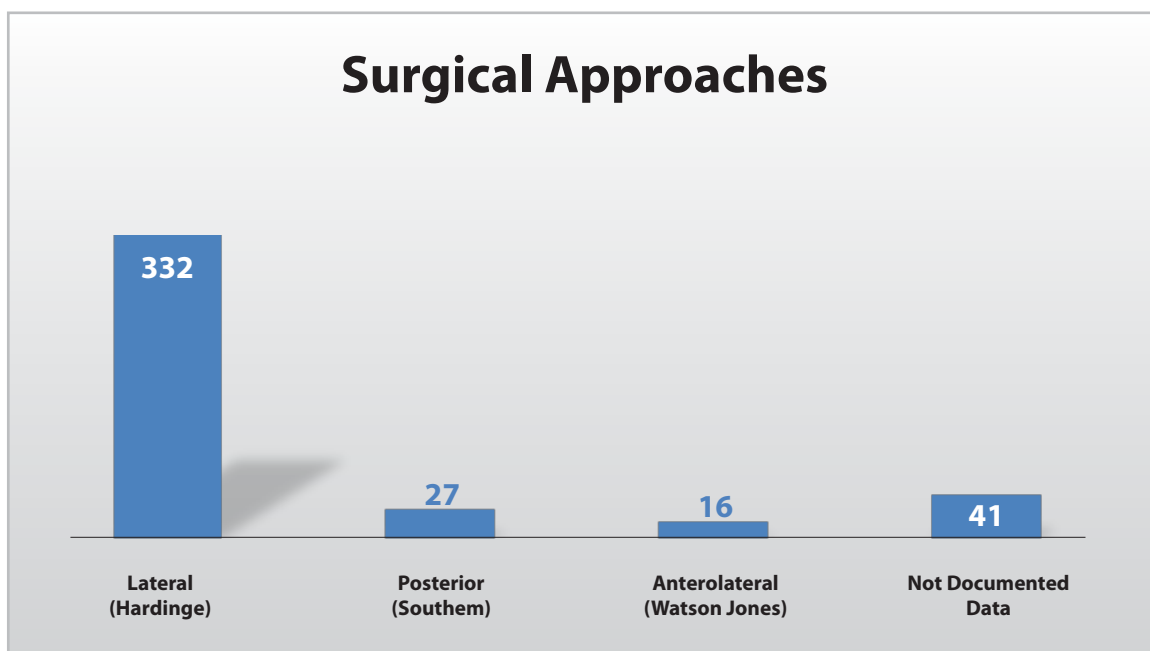


Primary Total Hip Arthroplasty

1st year

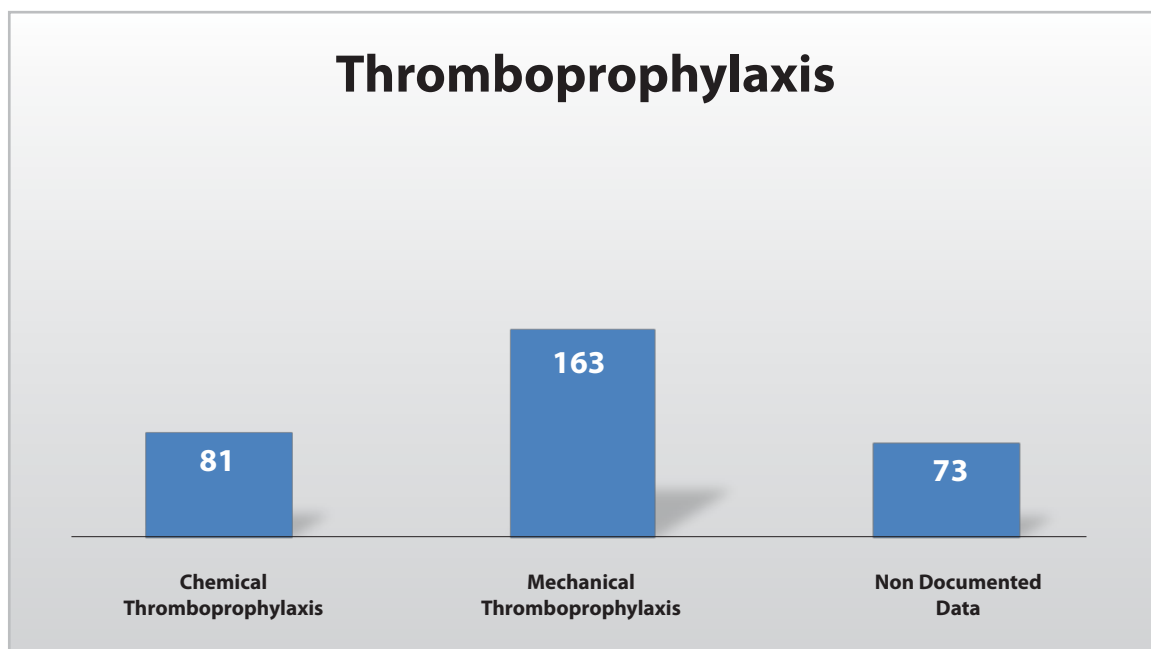


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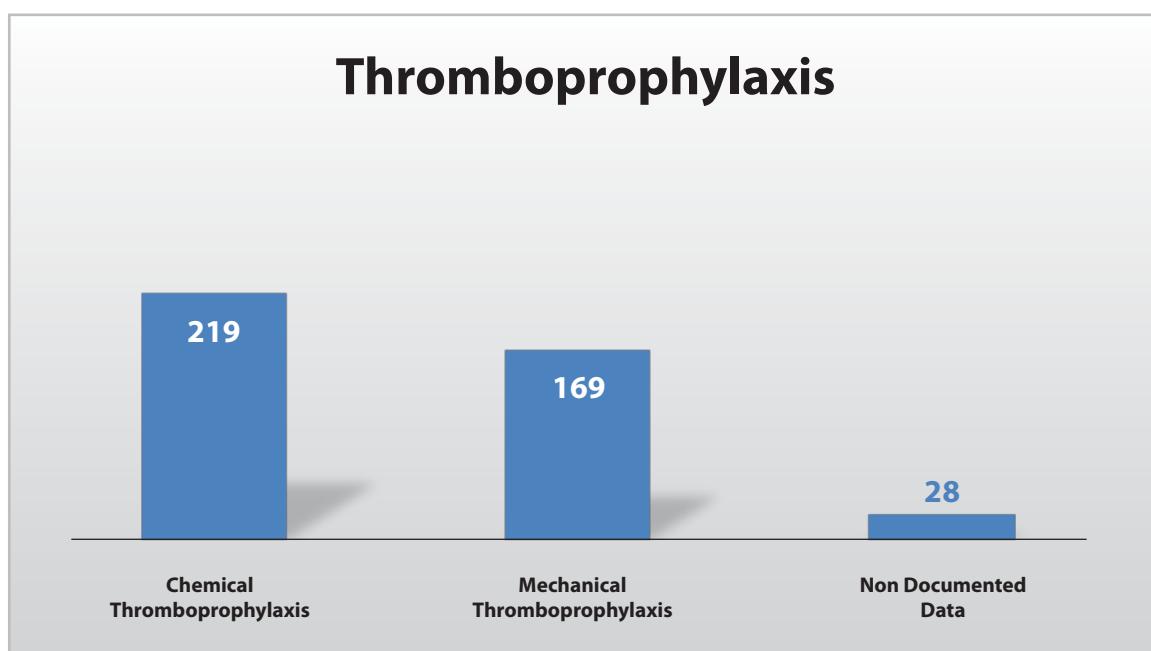


Primary Total Hip Arthroplasty

1st year

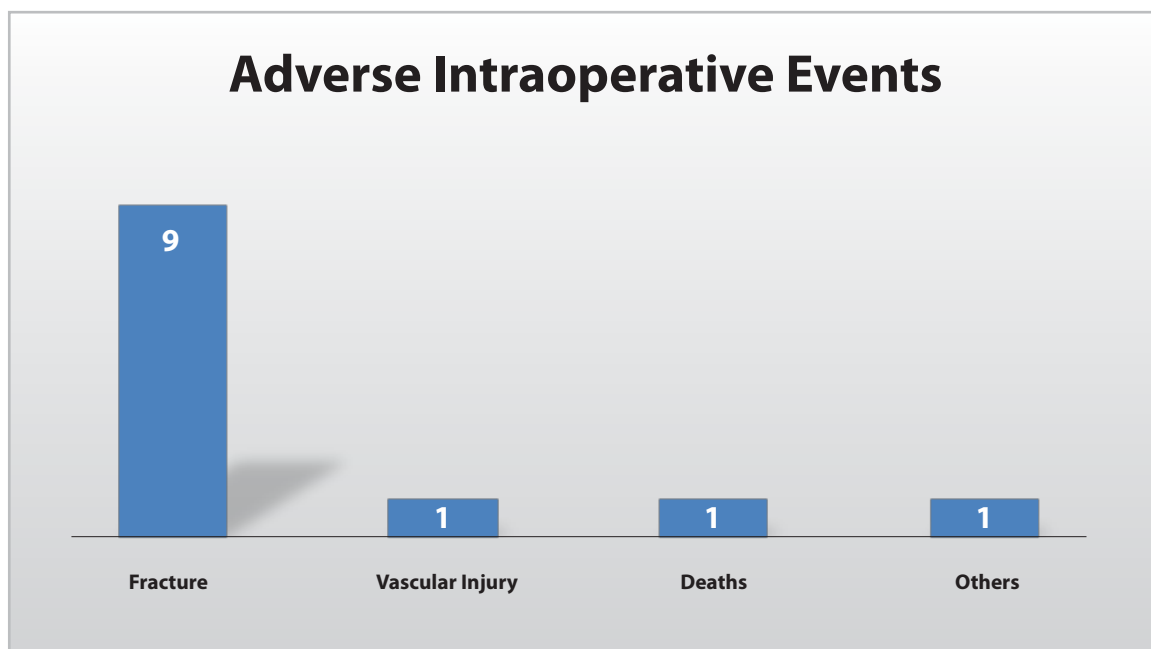


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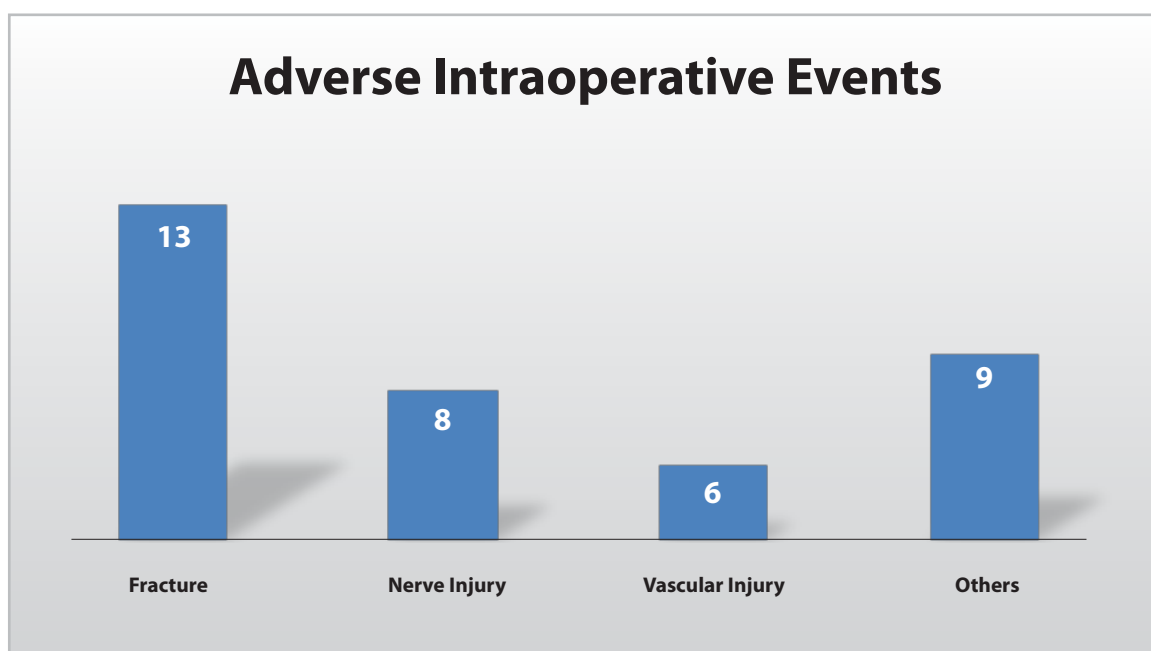


Primary Total Hip Arthroplasty

1st year

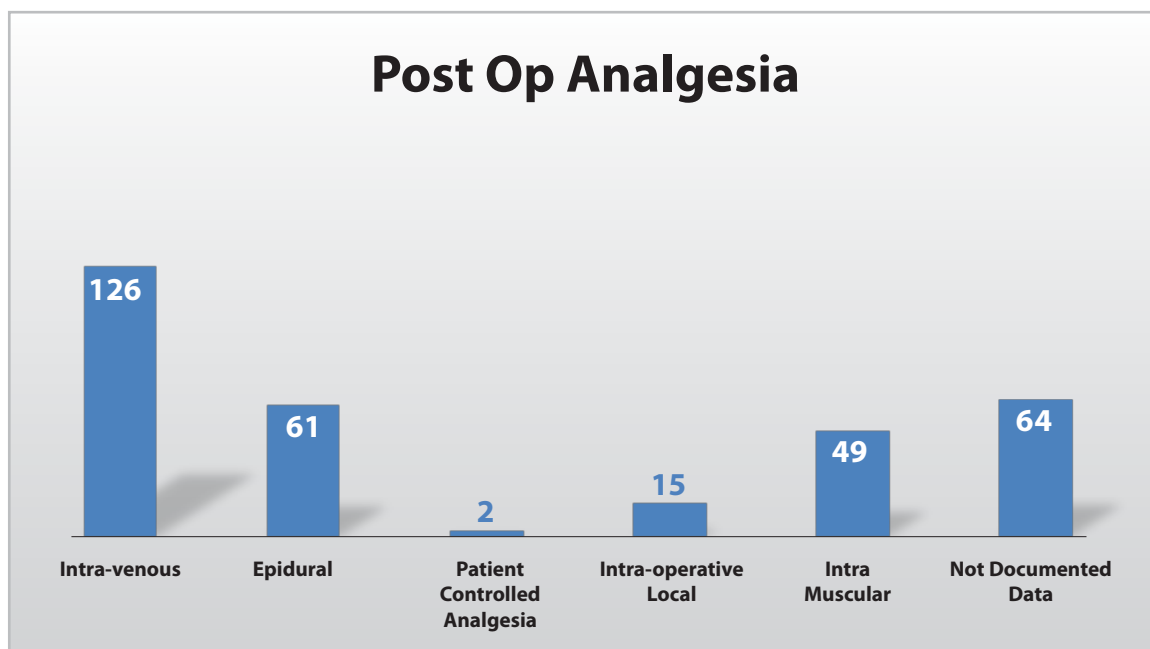


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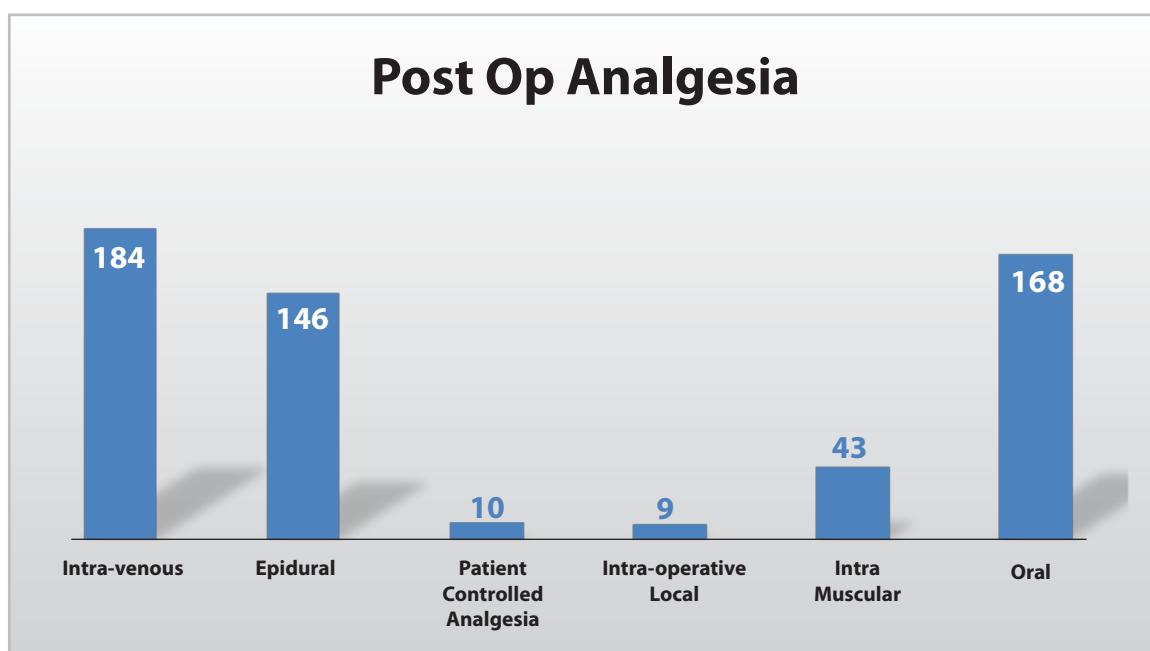


Primary Total Hip Arthroplasty

1st year

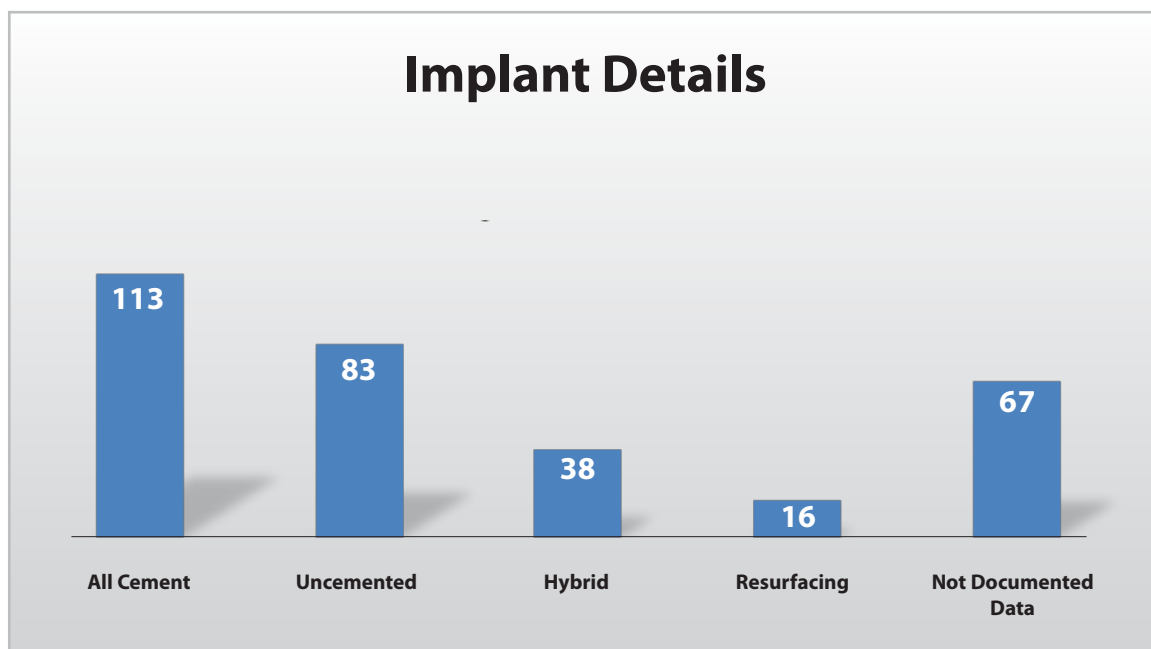


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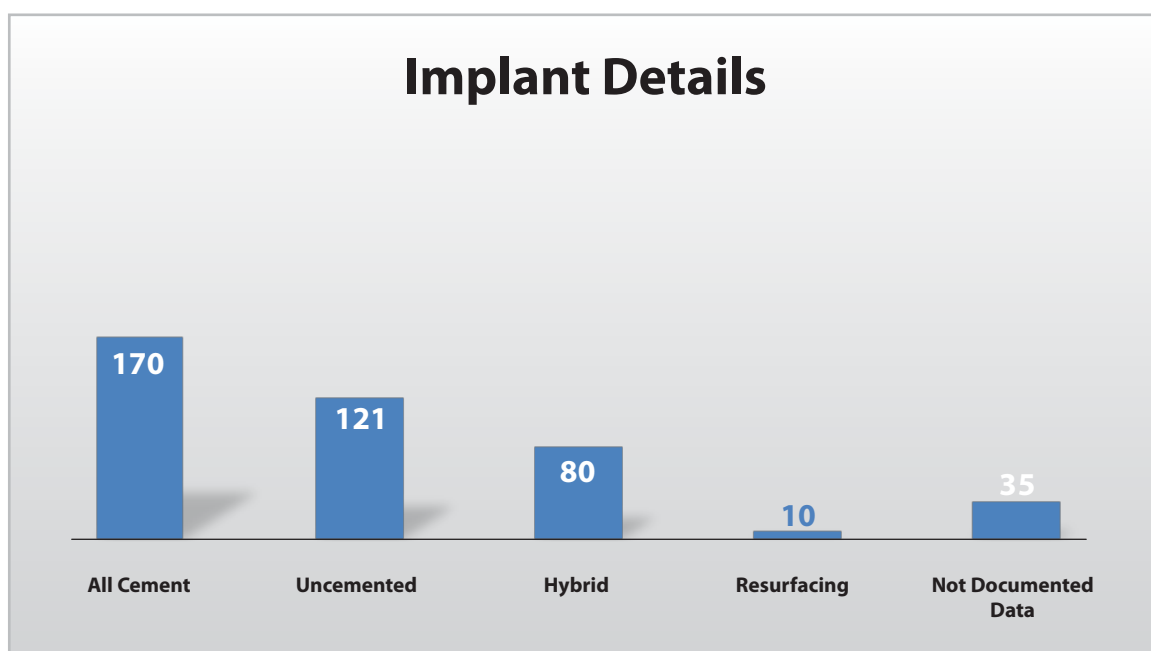


Primary Total Hip Arthroplasty

1st year

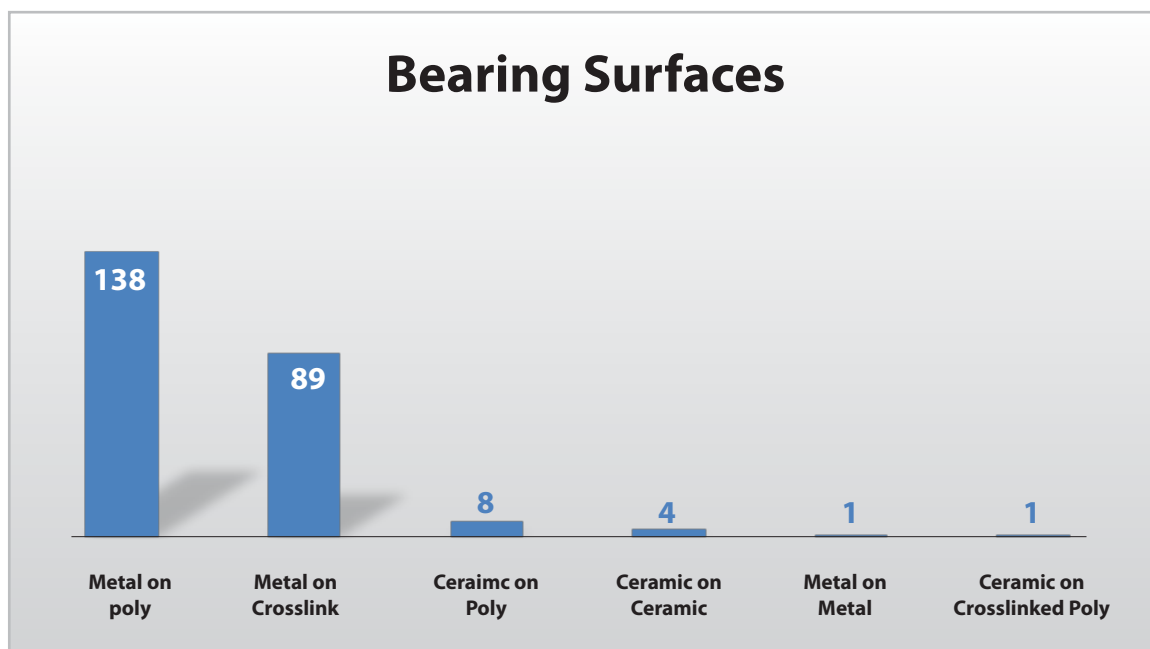


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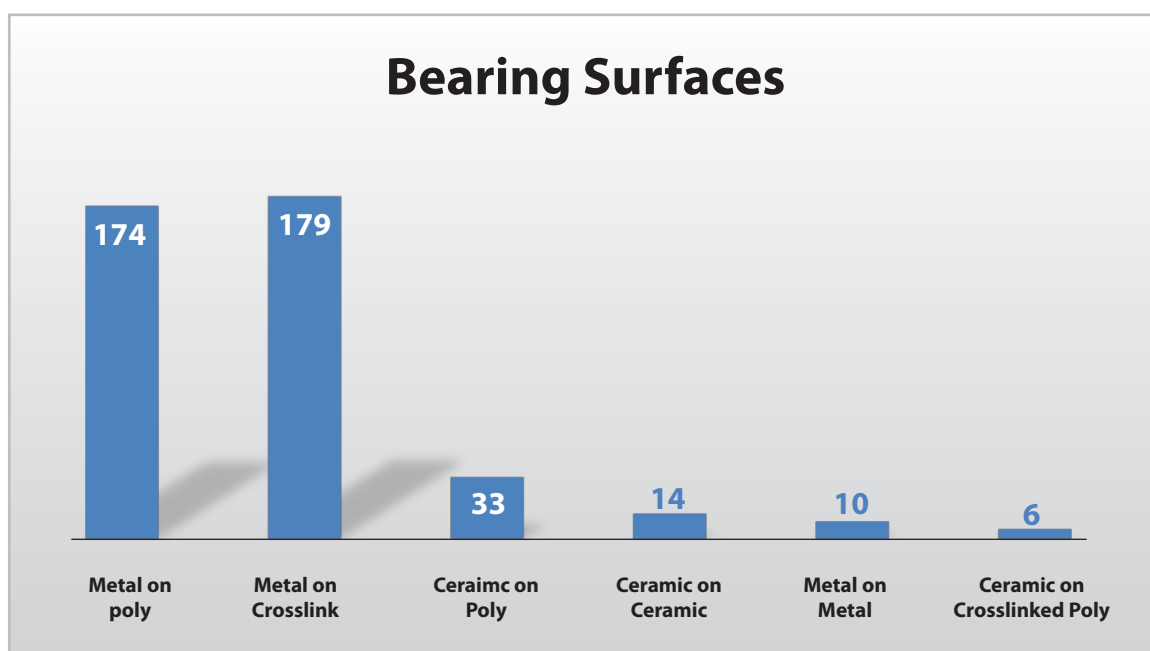


Primary Total Hip Arthroplasty

1st year

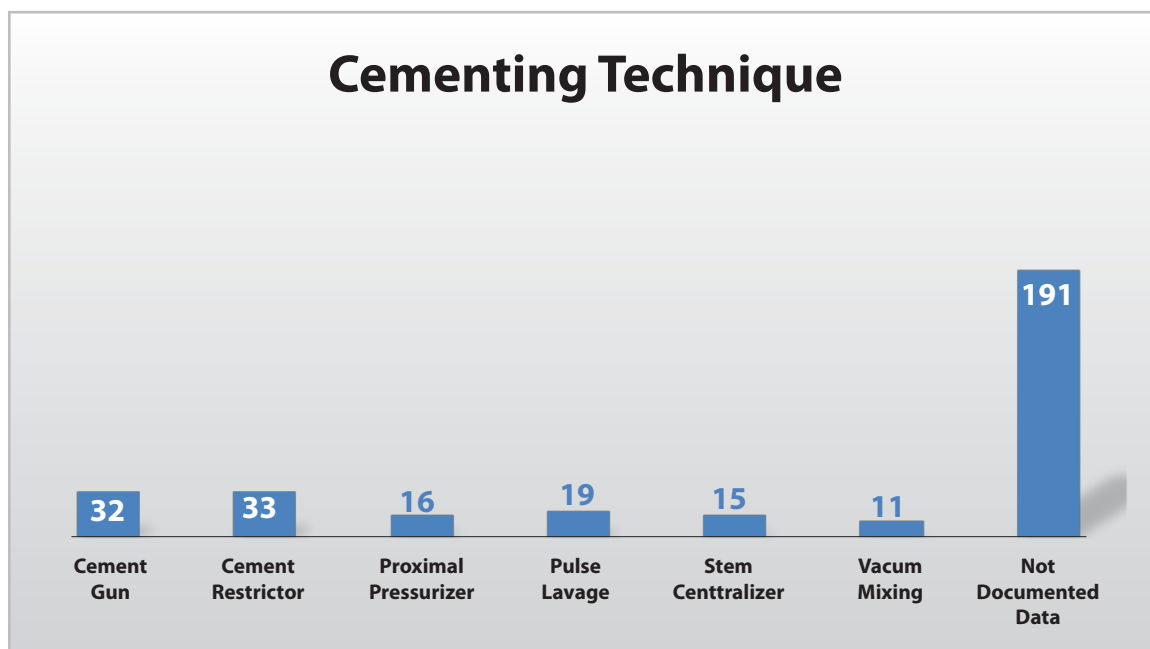


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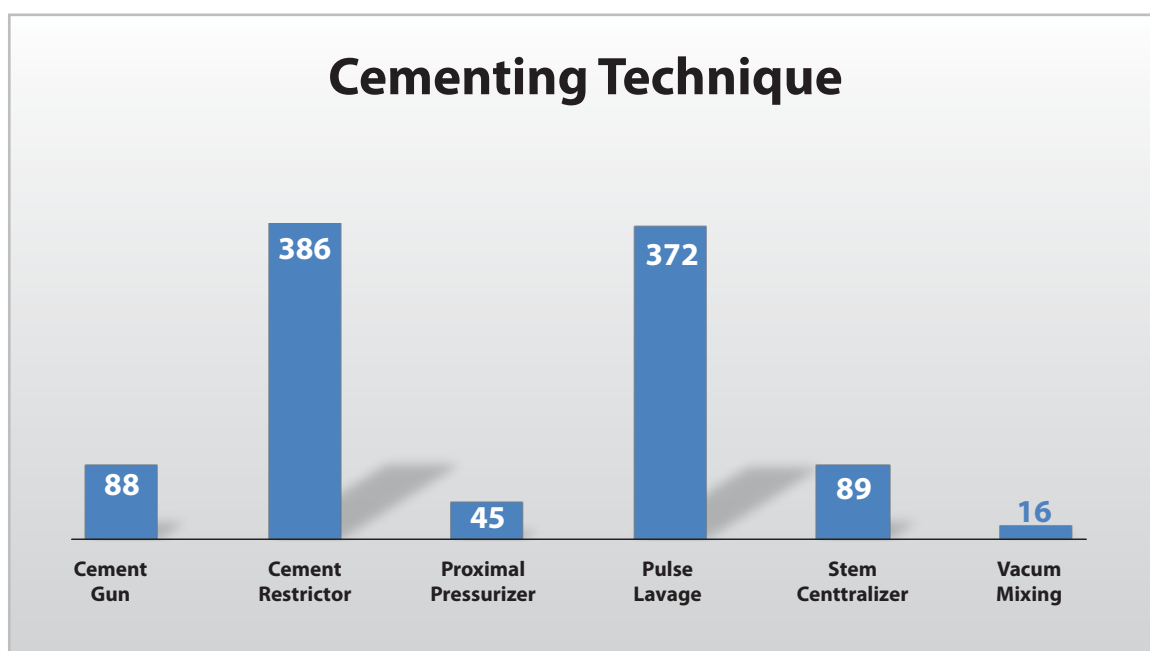


Primary Total Hip Arthroplasty

1st year

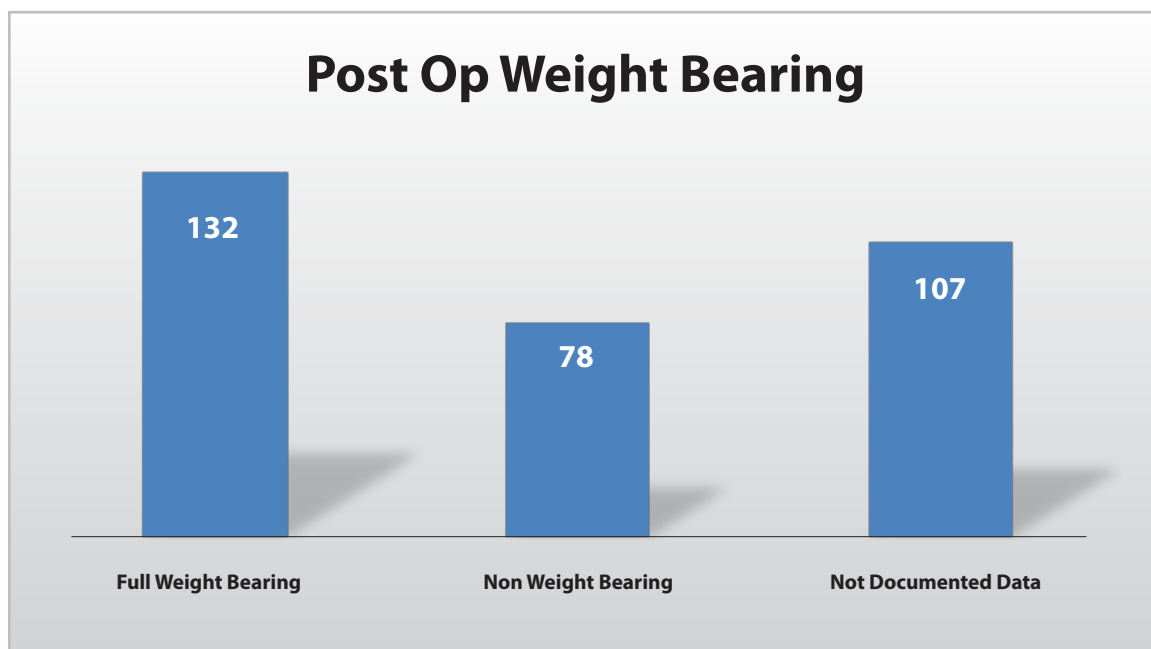


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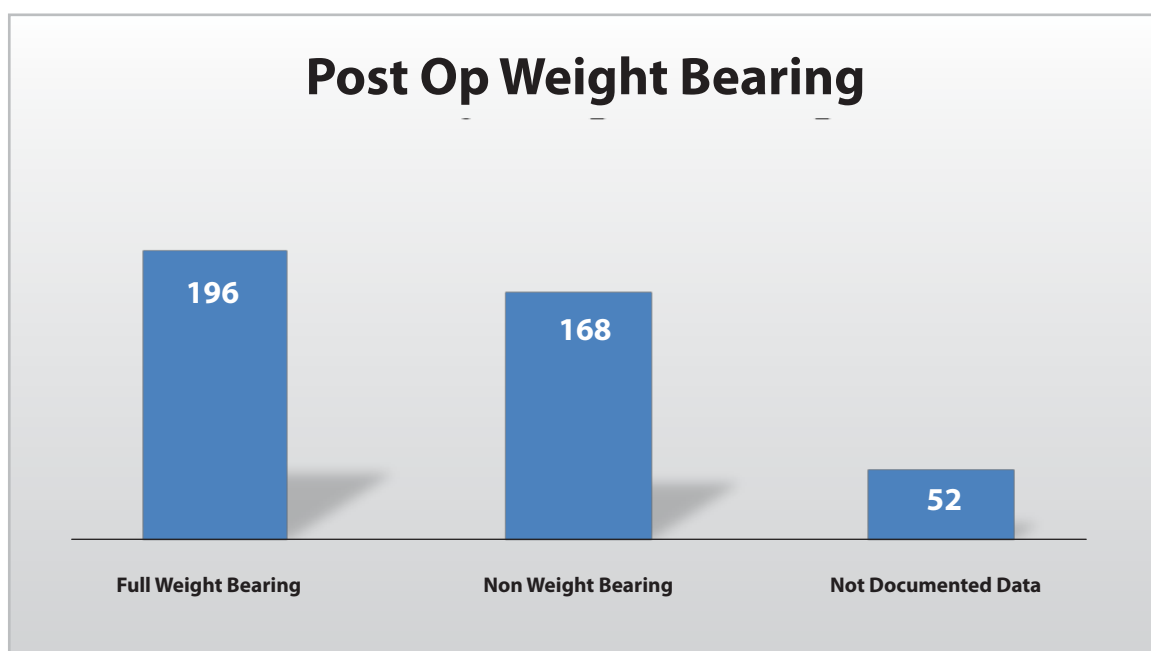


Primary Total Hip Arthroplasty

1st year

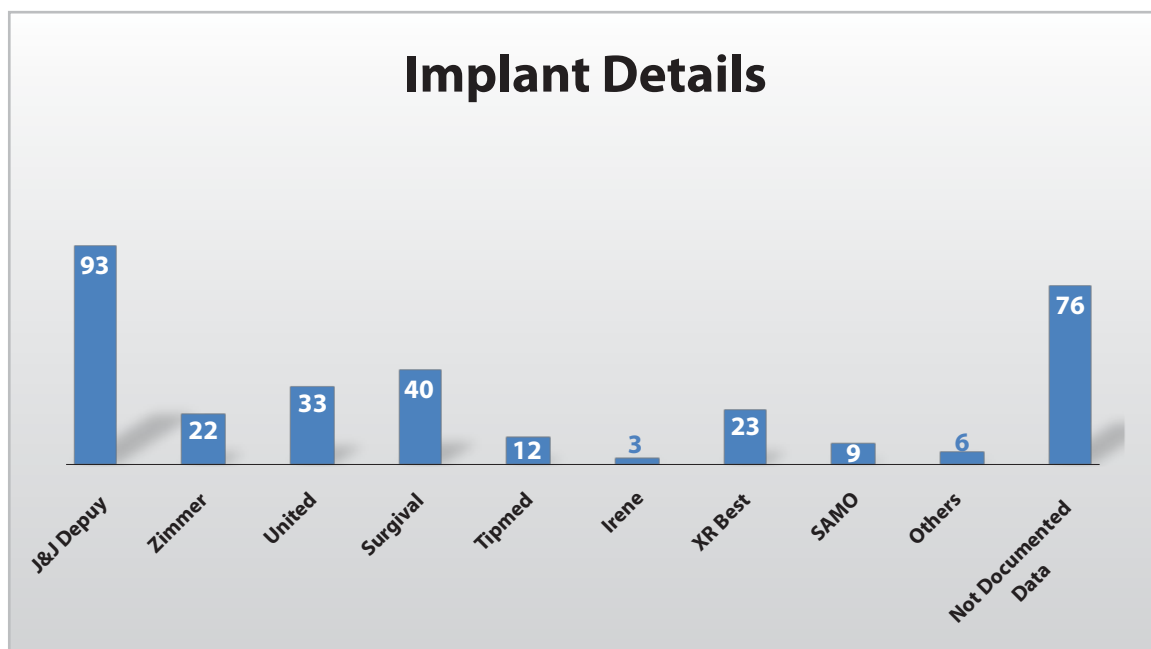


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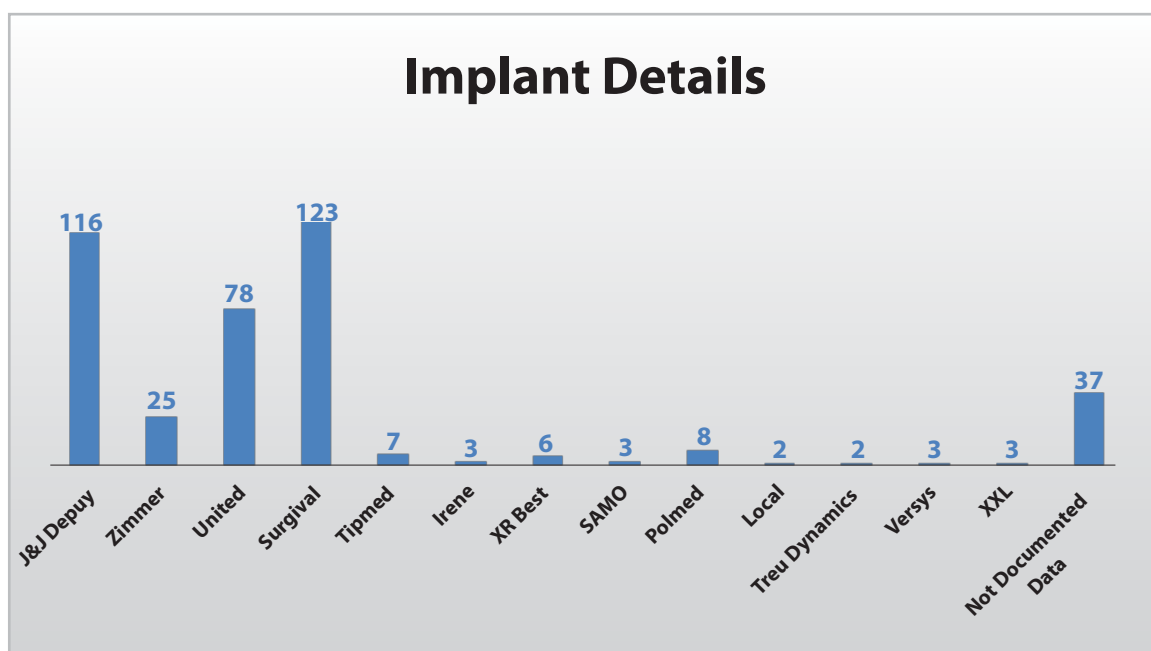


Primary Total Hip Arthroplasty

1st year



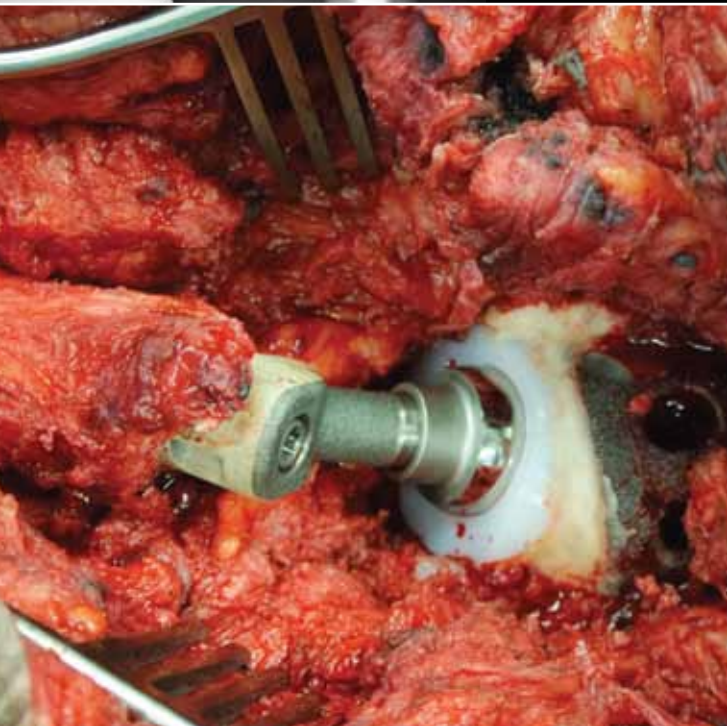
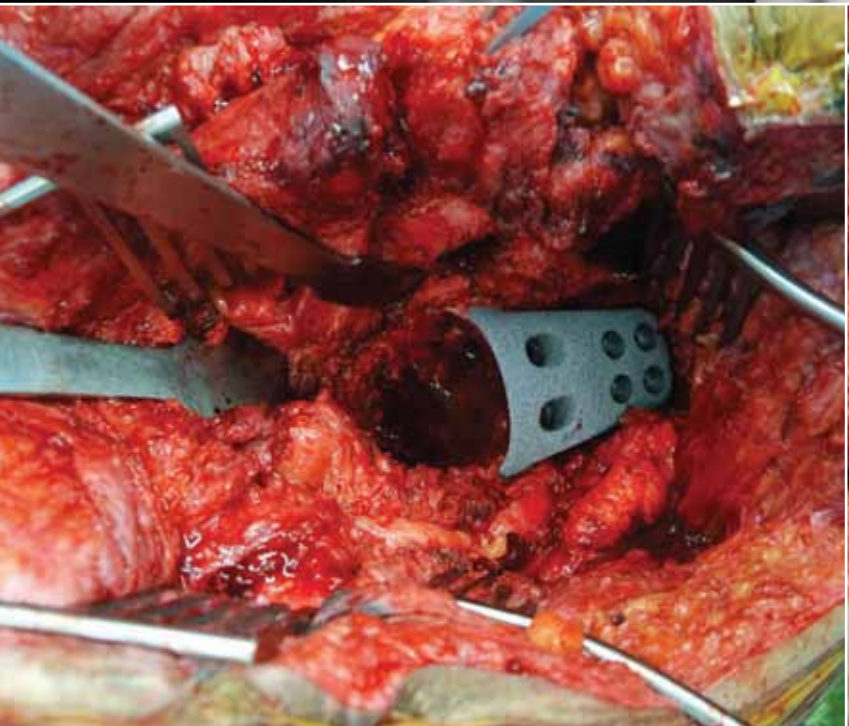
2nd year



Revision Total Hip Arthroplasty

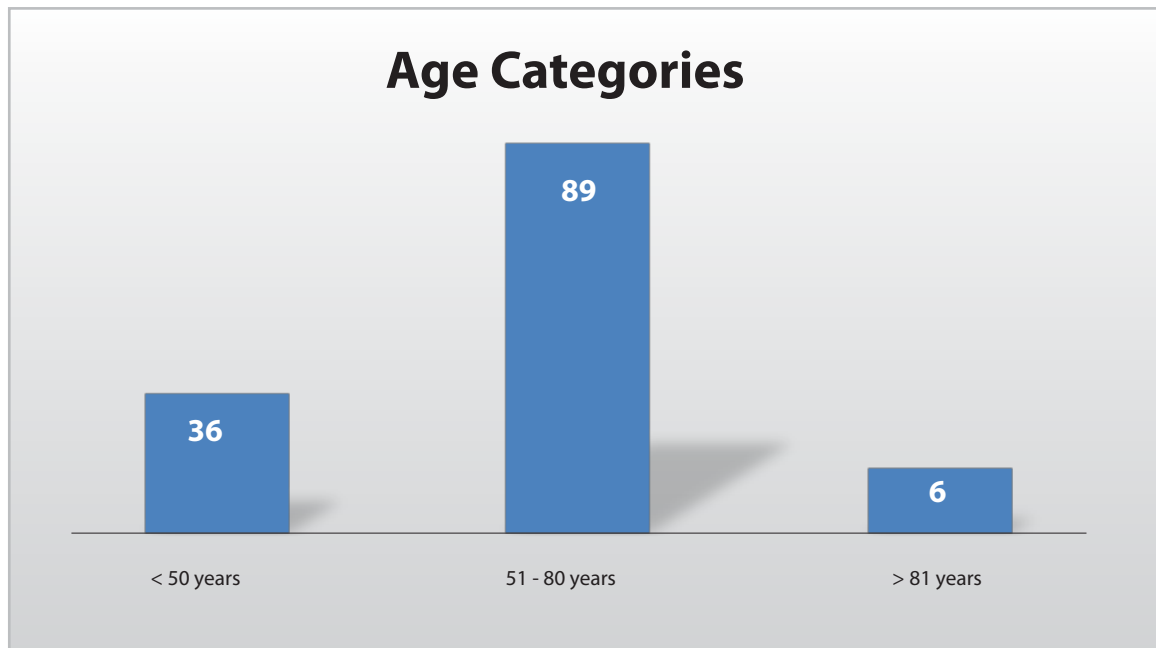
Section

IV

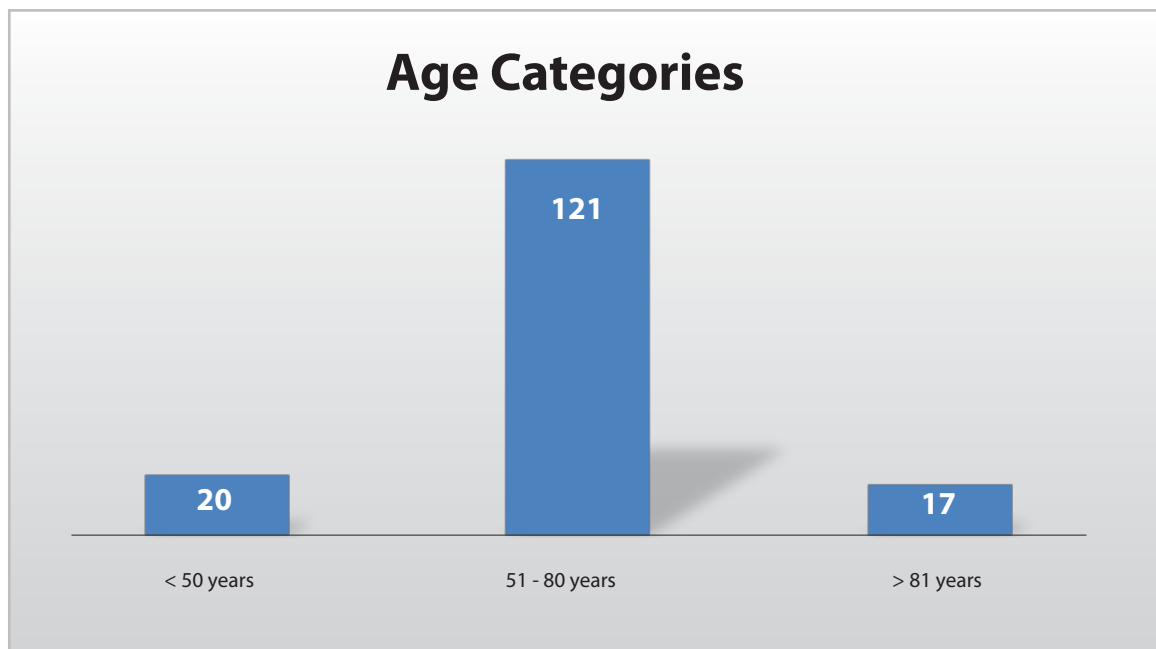


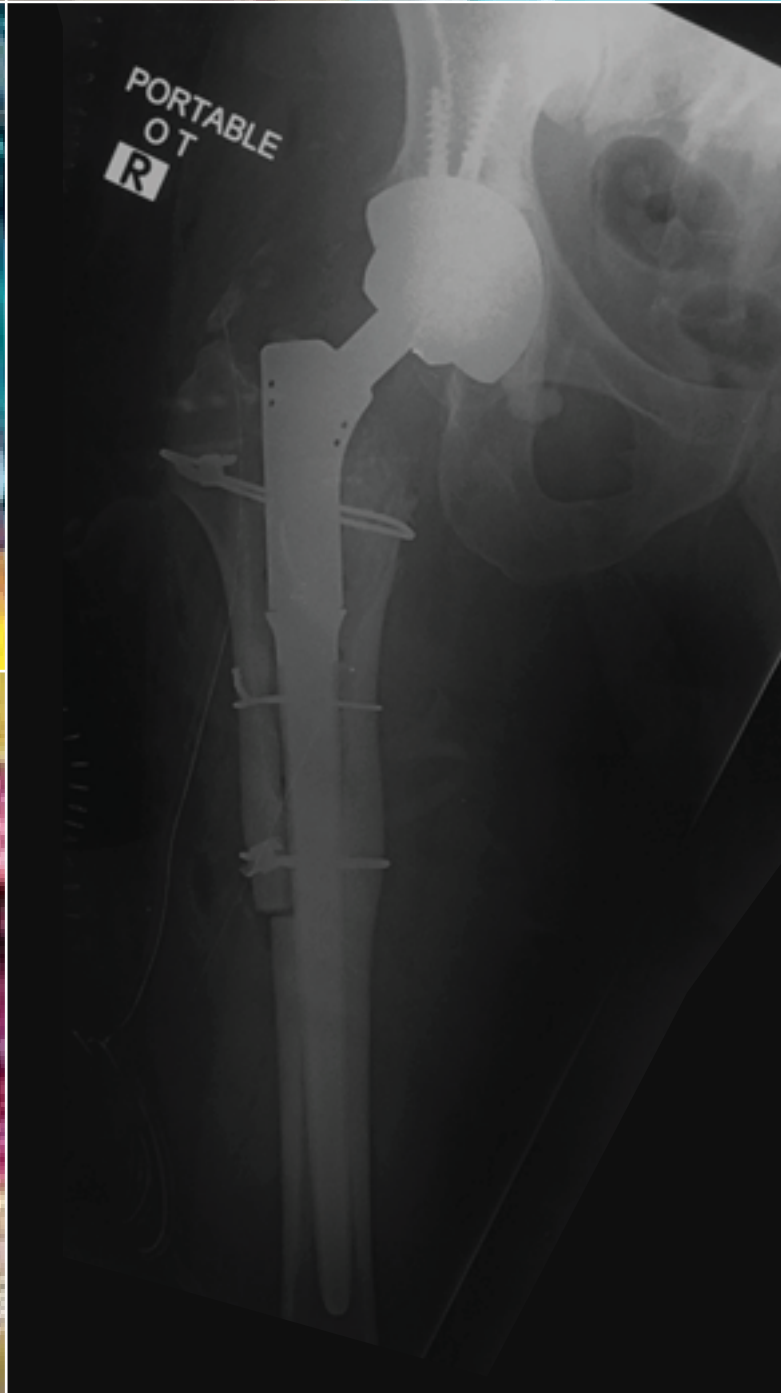
Revision Total Hip Arthroplasty

1st year



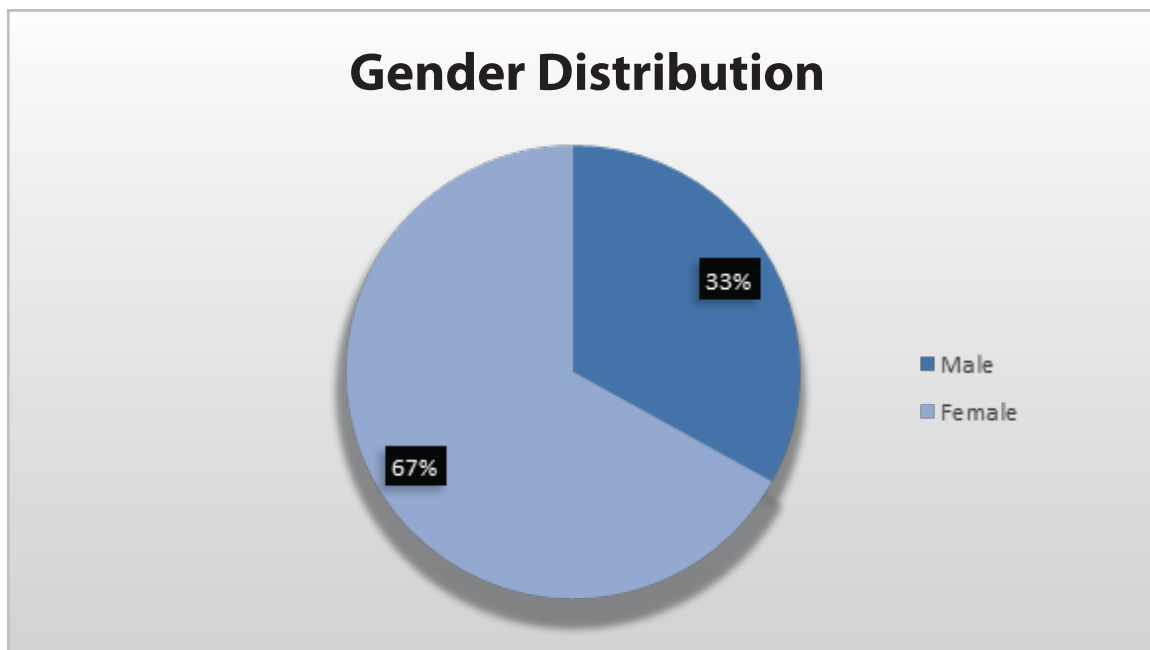
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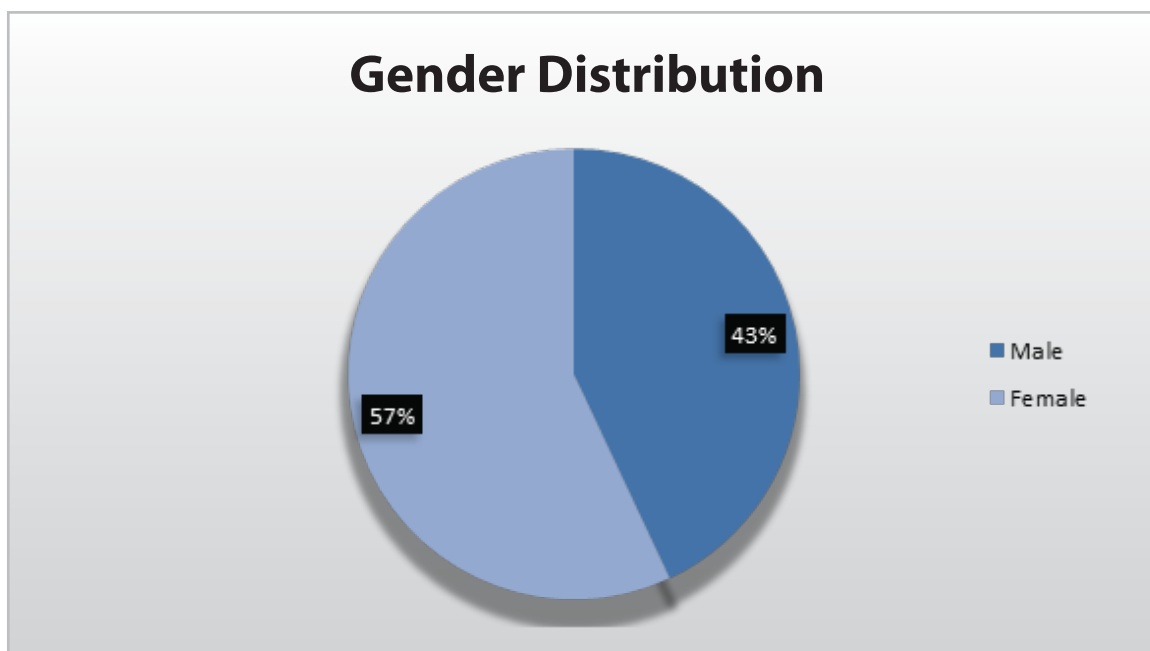


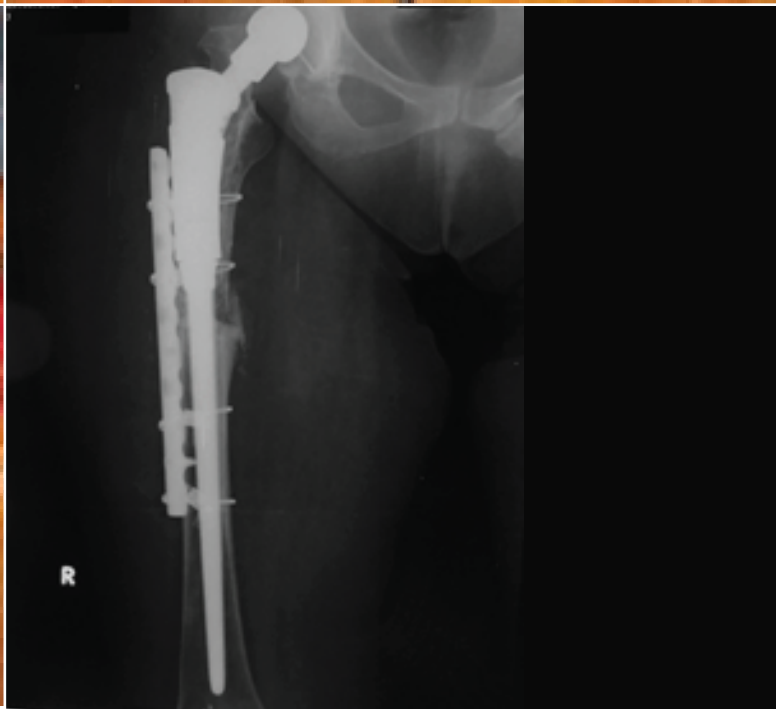
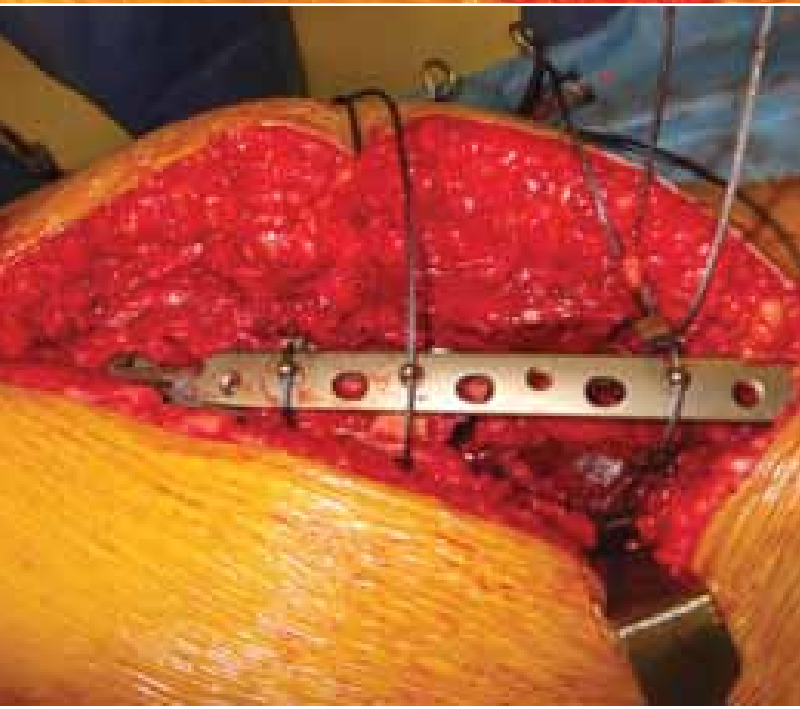
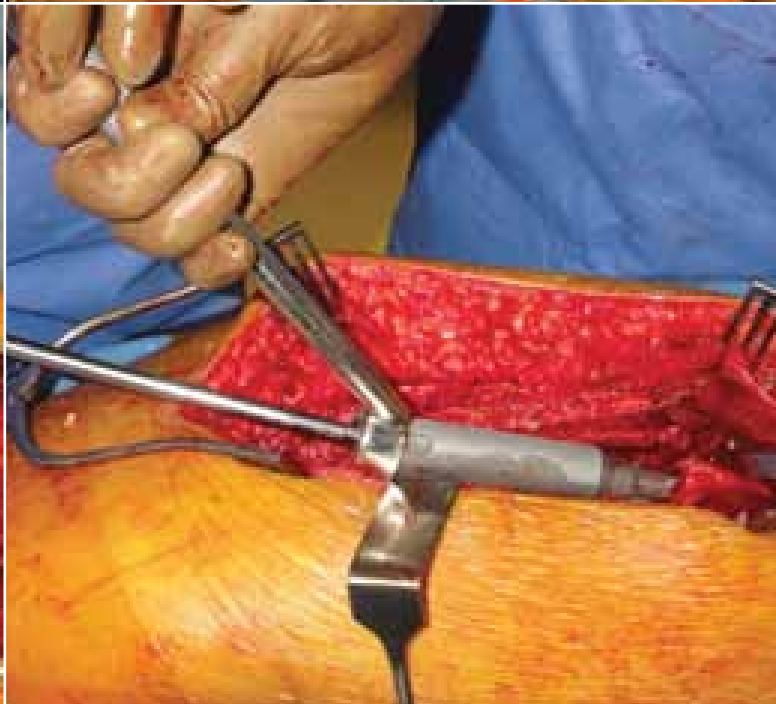
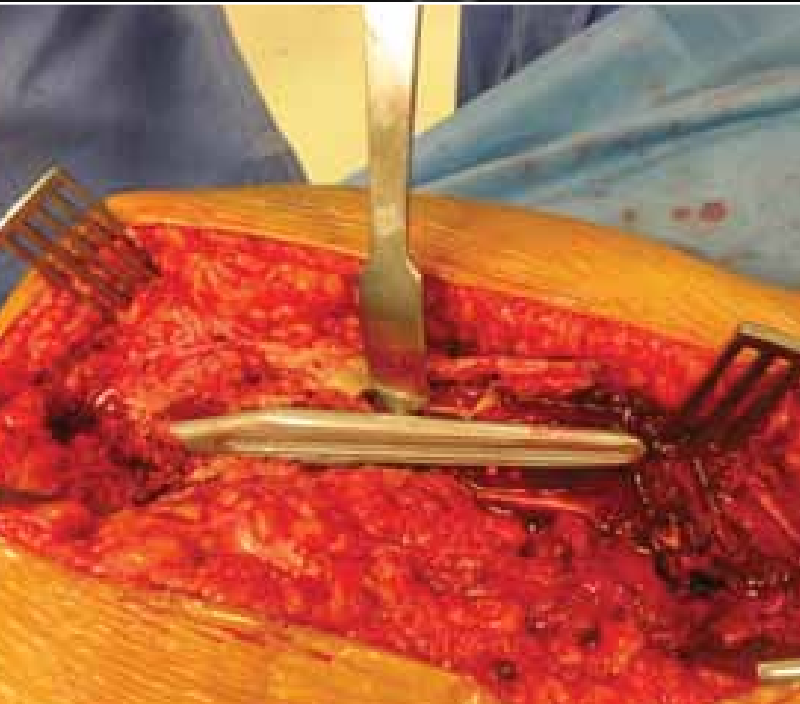
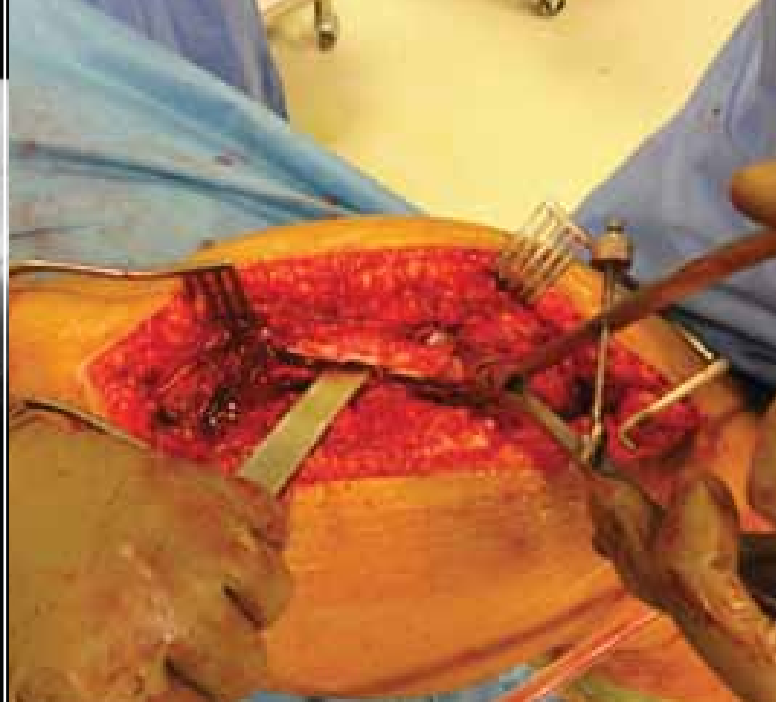
Revision Total Hip Arthroplasty

1st year



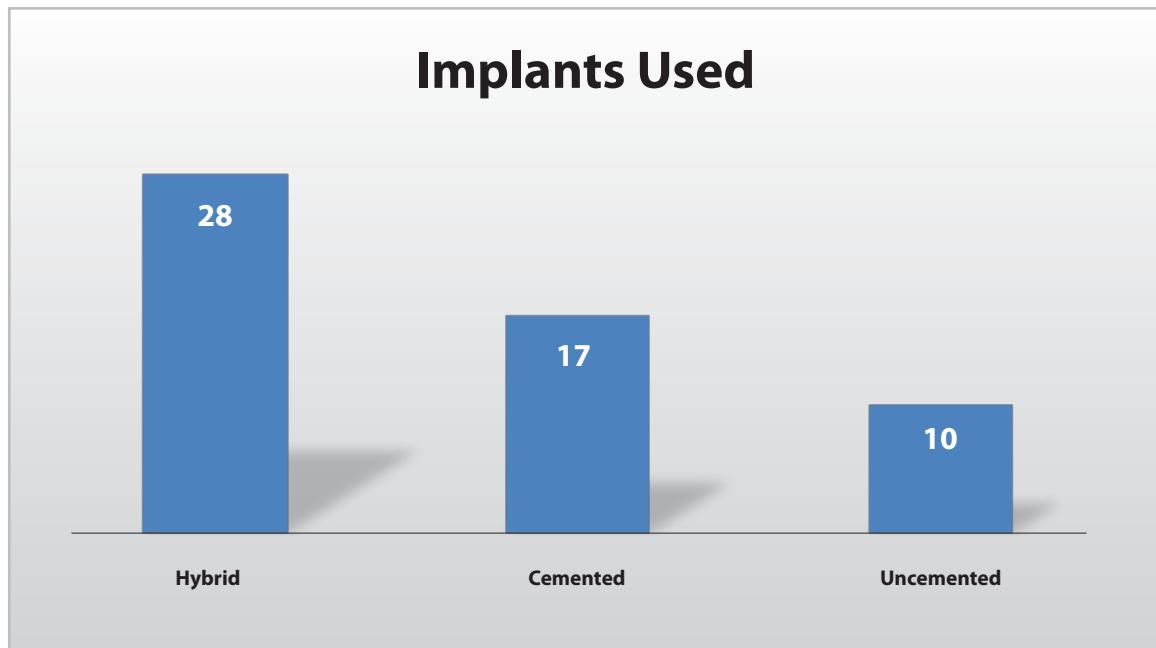
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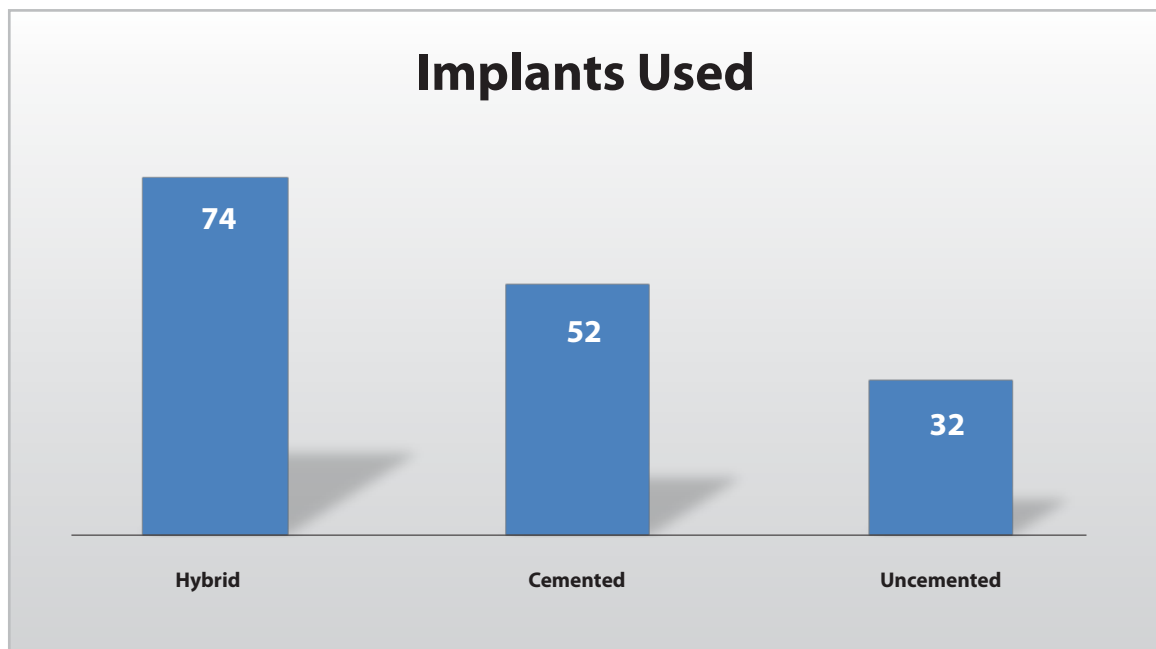


Revision Total Hip Arthroplasty

1st year

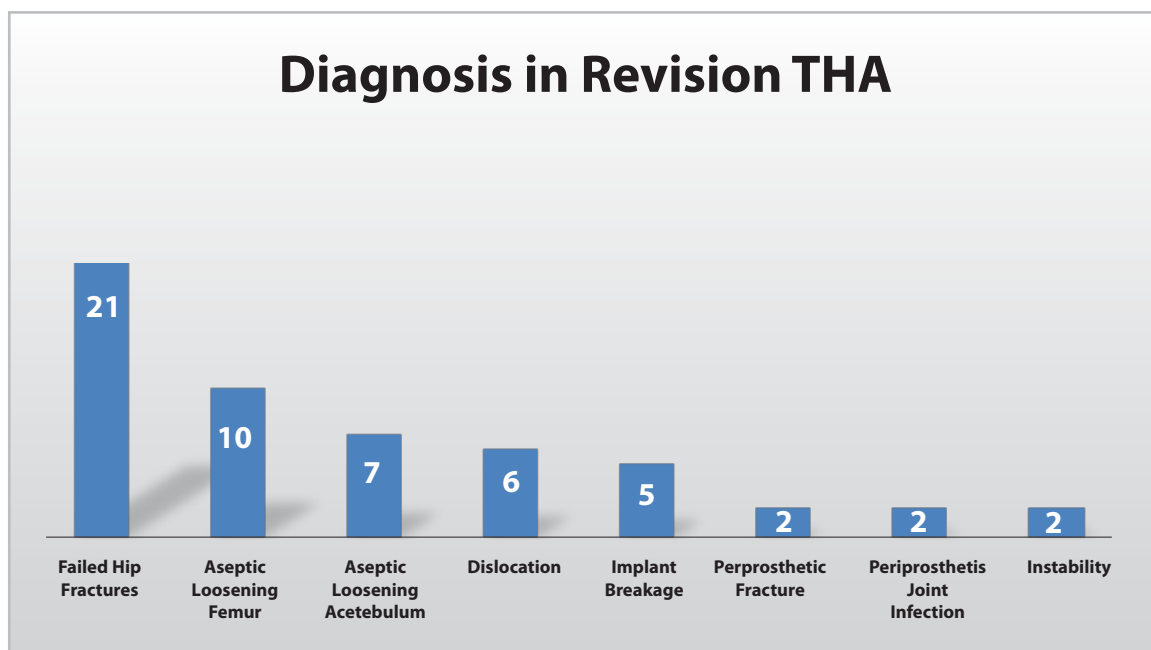


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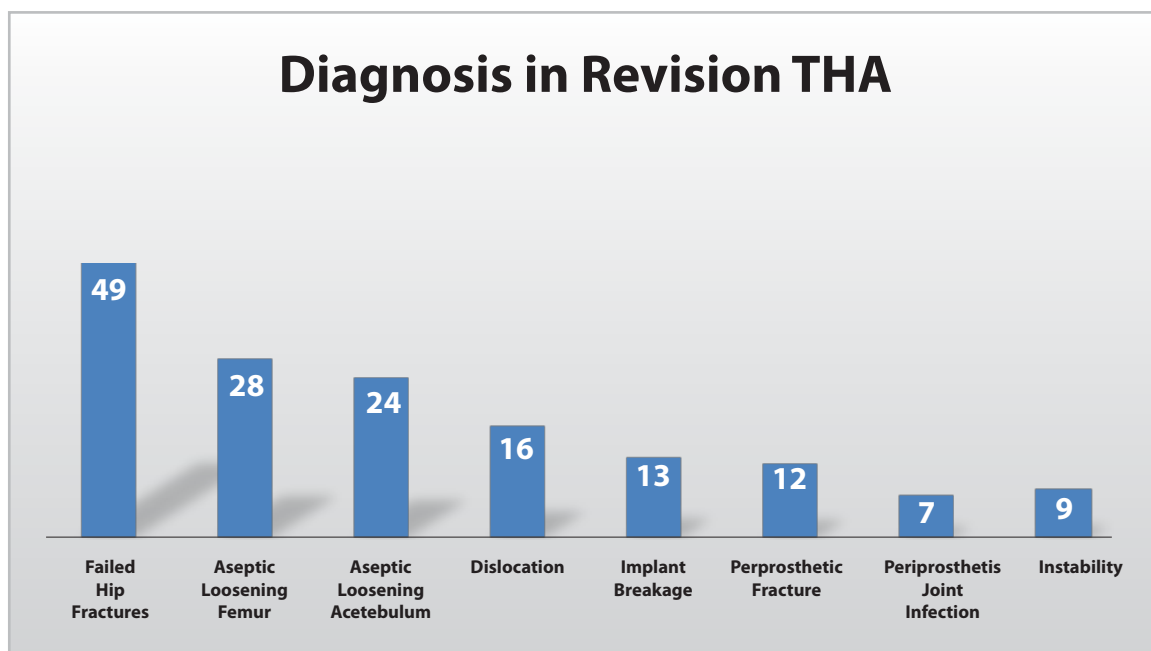


Revision Total Hip Arthroplasty

1st year



2nd year





PAS Partners





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