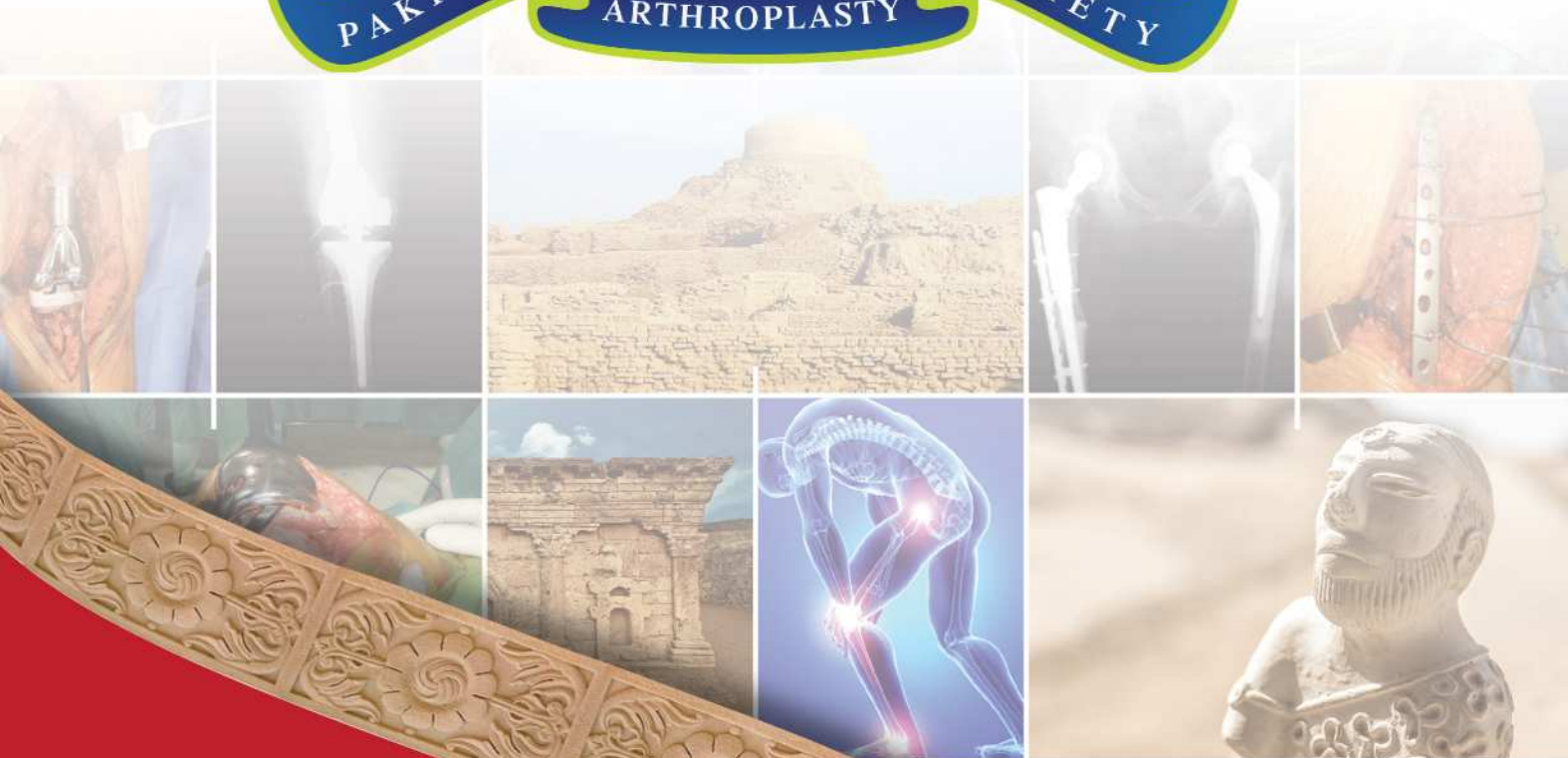




NATIONAL JOINT REGISTRY



**PAKISTAN NATIONAL
JOINT REGISTRY
2017 - 2018**

FOURTH ANNUAL REPORT



Theme

PNJR 4th year of Success: From Infancy to a leader in National Health Registries.

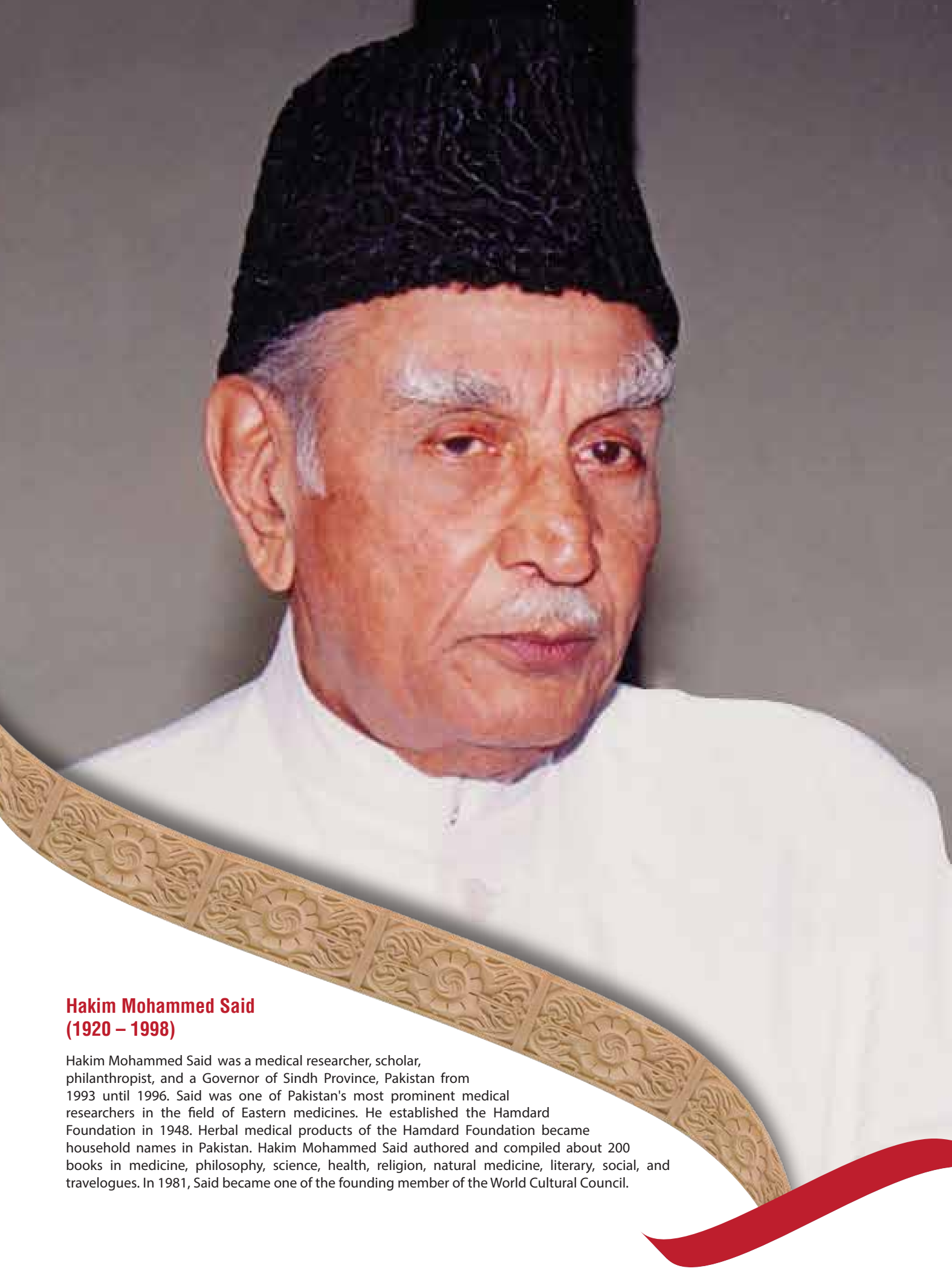
Pakistan: A cradle of oldest civilizations in the world

Dedicated to the memory of legendary forefather of eastern medicine

Hakim Mohammed Said

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





**Hakim Mohammed Said
(1920 – 1998)**

Hakim Mohammed Said was a medical researcher, scholar, philanthropist, and a Governor of Sindh Province, Pakistan from 1993 until 1996. Said was one of Pakistan's most prominent medical researchers in the field of Eastern medicines. He established the Hamdard Foundation in 1948. Herbal medical products of the Hamdard Foundation became household names in Pakistan. Hakim Mohammed Said authored and compiled about 200 books in medicine, philosophy, science, health, religion, natural medicine, literary, social, and travelogues. In 1981, Said became one of the founding member of the World Cultural Council.

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nore
Network of Orthopaedic Registries of Europe



Swedish Knee
Arthroplasty Register

APA
ASIA
PACIFIC
ARTHROPLASTY
SOCIETY



Partners of Pakistan Arthroplasty Society (PAS)



Spanish Knee Society



ICJR
Middle East



THKS



ARTROPLASTI
DERNEĞİ



JRS Taiwan



It is with great pleasure that I write this foreword to the fourth edition of the Pakistan National Joint Registry. Joint replacements have revolutionized the way we can improve the lives of countless people who suffer the daily pain of arthritic joints. There is still much fear in some parts of our APOA regions regarding the outcomes of arthroplasty. I have myself treated senior doctors in the musculoskeletal field who have put off surgery because of this very doubt. It is ingrained in medical education and guidelines that joint replacement is the resort of last choice. This is because there is no long-term data regarding joint replacements in many parts of the world. Common questions such as “How long do joint replacements last?” and “What are the results of revision arthroplasty” and “What is a good joint for me?” need to be answered with local data.

A joint replacement registry plays an important role in determining the trends, short and long term results of the work of arthroplasty surgeons in the region. It also forms the basis of learning the differences between practices, not just within the region but also between regions with arthroplasty registers. In some ways registry outcomes may be difficult to compare between regions as the indications for and conditions of surgery may be vastly different. Close coordination between the the Pakistan Arthroplasty Society and other interested international stakeholders is essential for results to be compatible. I am heartened to see that the leaders of the PAS have made a huge effort to gain more collaborators both locally and internationally.

Registers cannot be set up without great leadership and cooperation within the community of surgeons involved. The Pakistan Arthroplasty Society has managed this difficult feat and joined an elite set of nations, mostly Western, that have established arthroplasty registries. My friends, Prof. Syed Shahid Noor and Prof. Muhammad Amin Chinoy, and many others have led the way for the rest of the region to start their own registers. I hope that we will all take this up in the near future.

David Siew-Kit Choon

President, Asia Pacific Orthopaedic Association

Past President, Malaysian Orthopaedic Association

Past President, Computer Assisted Orthopaedic Surgery, Asia Pacific

Retired Professor of Orthopaedic Surgery University Malaya Medical Centre



Prof. Gilles Bousquet
(Saint Etienne, France)

Feat: Developed the concept of the tripolar articulation in Hip arthroplasty in 1976. The so called dual mobility hip. His revolutionary concept reduced dislocation rates and reduced wear by providing dual mobility interface and large head size both.

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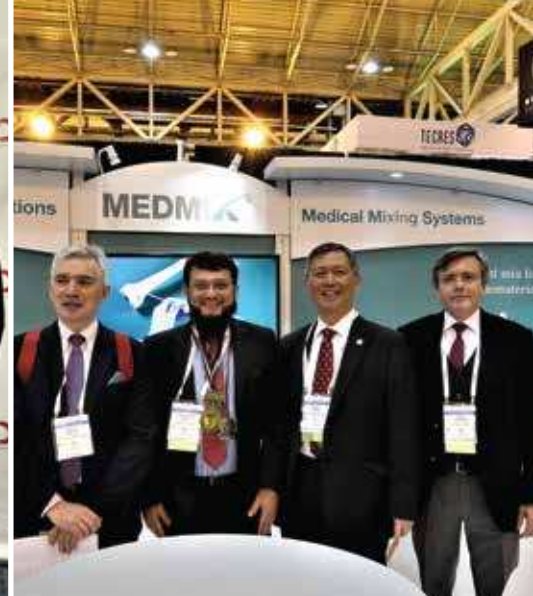
MBBS, FCPS (Orth)
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Prof. Shahid Noor presenting PNJR 3rd Annual Report to Prof. David SK Choon, Current president APOA.



Prof. Shahid Noor presenting PNJR 3rd Annual Report to Prof. William J Maloney, president AAOS.



Group Photograph of Prof. Shahid Noor with Prof. David SK Choon President APOA and Prof. Dr. Önder AYDINGÖZ, President EFORT.



Group photograph of Presidents of National Orthopedic Societies from around the globe during AAOS meeting at New Orleans 2018.



Prof. Shahid Noor presenting PNJR 3rd Annual Report to Prof. Richard De Steiger, president International Society of Arthroplasty Registries (ISAR)



Prof. Shahid Noor presenting PNJR 3rd Annual Report to Prof. Ola Rolfson Director Swedish Hip Arthroplasty Register.



Prof. Shahid Noor presenting PNJR 3rd Annual Report to Prof. Fares. Haddad, editor in chief The Bone and Joint Journal (JBJS-B).

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Research Partner

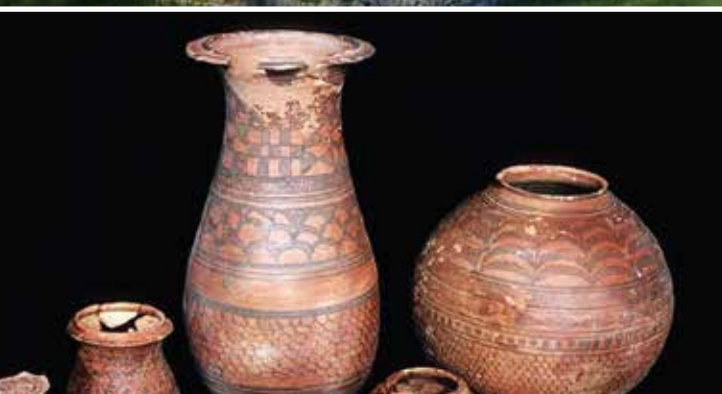
1. Health Reserch Advisory Board (HRAB)
2. Metrics Research



INTRODUCING

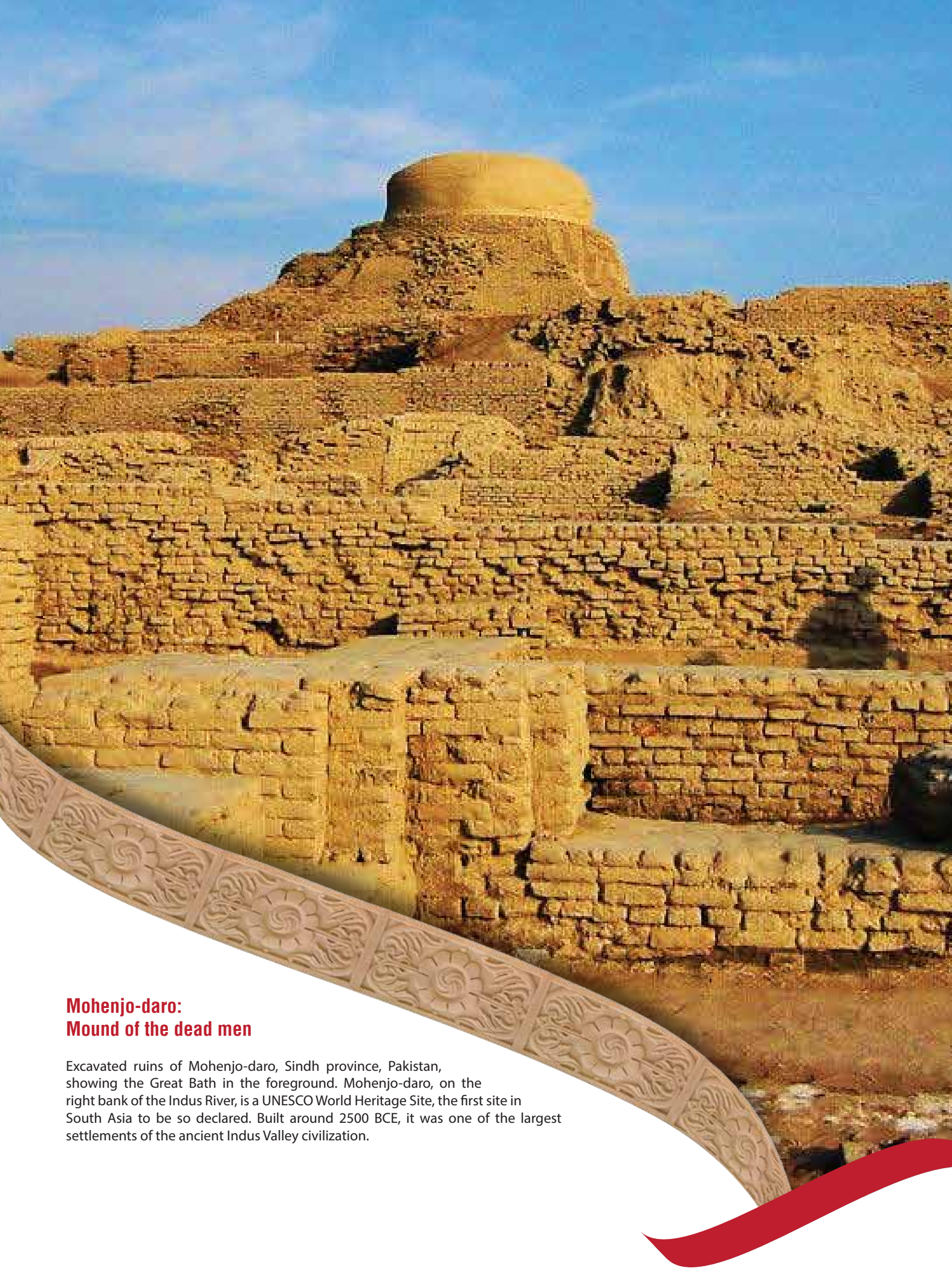
PART 1

PNJR 4th Annual Report



Journey of PAS and PNJR

SECTION I



Mohenjo-daro: Mound of the dead men

Excavated ruins of Mohenjo-daro, Sindh province, Pakistan, showing the Great Bath in the foreground. Mohenjo-daro, on the right bank of the Indus River, is a UNESCO World Heritage Site, the first site in South Asia to be so declared. Built around 2500 BCE, it was one of the largest settlements of the ancient Indus Valley civilization.

Leadership in National Health Registries

Pakistan National Joint Registry (PNJR) was the brain child of Pakistan Arthroplasty Society (PAS). This project started as a self conceived, self grown and self groomed registry established totally indigenously with the help of our research partners Metrics Research. With the growing need for data archiving and need to present good quality research work to establish Pakistan as an entity both in regional as well as international scientific meetings, the steering committee for the proposed PNJR was established by the executive board of PAS.

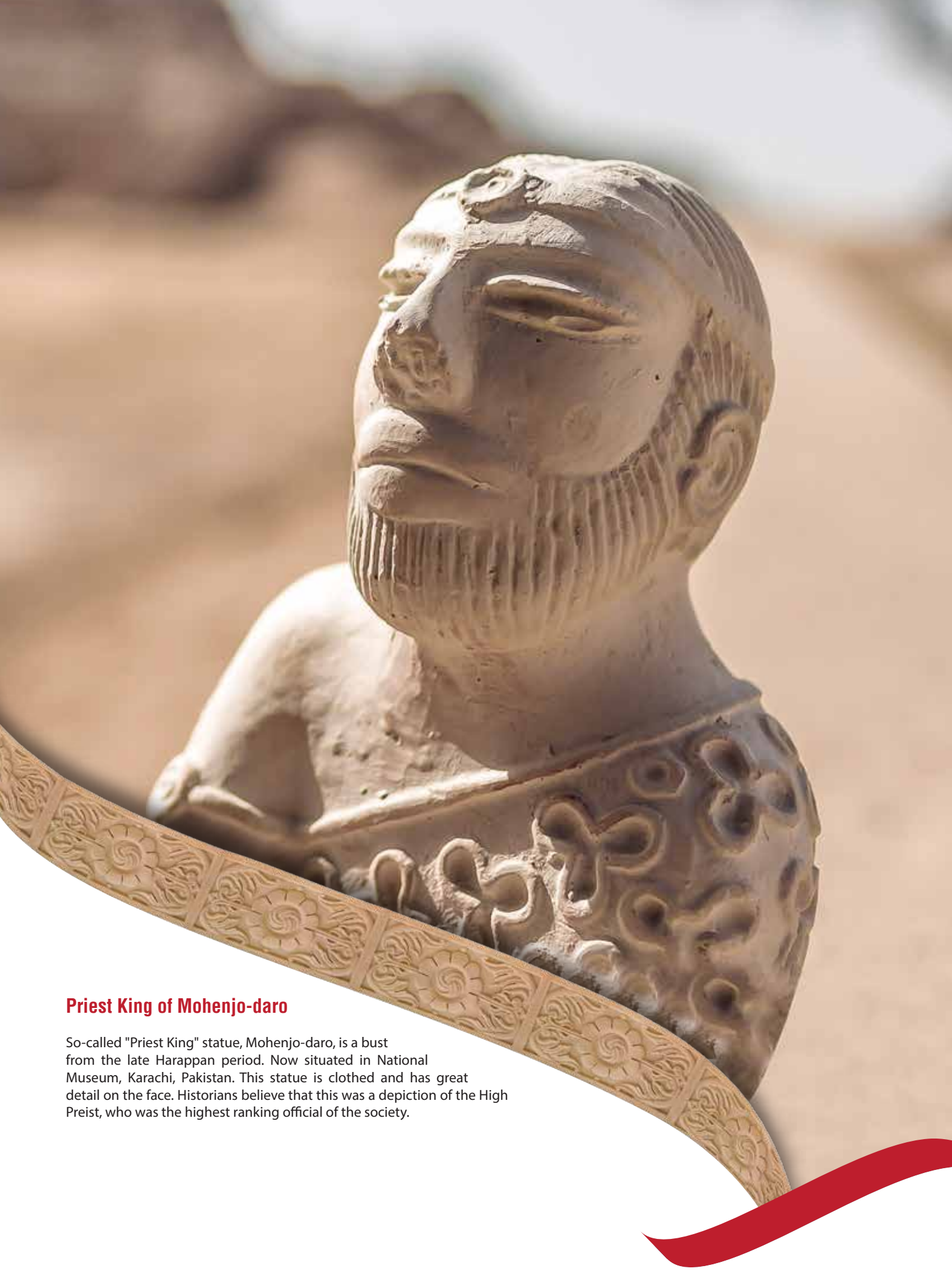
With coming years, many changes and modifications were made using the valuable feedback from the users of the registry. The CRF was modified, online data completeness was ensured by providing training to the registered principal investigators. A follow up data registry form was developed.

Led by the success of PNJR, the steering committee was invited to be part of the Health Research Advisory Board (HRAB) which in itself is an autonomous body of senior healthcare professionals from different specialties of medicine that addresses and advises institutes and individual researchers on matters of healthcare research. It has been through the platform of HRAB that we have been able to inspire other specialties to develop their own registries providing them technical advice and logistic support from our research partners.

Following disease registries have emerged in the last 3 years from Pakistan.

1. Diabetic Registry of Pakistan 1 (DROP 1)
2. Cardiac Registry of Pakistan (CROP)
3. Hepatitis Registry of Pakistan (HROP)
4. Stroke Registry of Pakistan (SROP)
5. Gynaecology Registry of Pakistan (GROF)

Other registries are also being established. Ours is a fine example of positive influence in the field of research in medicine and allied healthcare. We have emerged as national leaders in healthcare registries and we hope to keep exerting the positive influence to permanently change the way healthcare related research is done in Pakistan.



Priest King of Mohenjo-daro

So-called "Priest King" statue, Mohenjo-daro, is a bust from the late Harappan period. Now situated in National Museum, Karachi, Pakistan. This statue is clothed and has great detail on the face. Historians believe that this was a depiction of the High Priest, who was the highest ranking official of the society.

Upgrades in Data Collection

Model to address Data Completeness

SECTION II



Dancing Girl

Dancing Girl is a prehistoric bronze sculpture made in approximately 2500 BCE in the Indus Valley Civilisation city of Mohenjo-daro (in modern-day Pakistan), which was one of the earliest human cities. The statuette is 10.5 centimetres (4.1 in) tall, and depicts a young woman or girl with stylized proportions standing in a confident, naturalistic pose. Dancing Girl is well-regarded as a work of art, and is a cultural artefact of the Indus Valley Civilisation. The statuette was discovered by British archaeologist Ernest Mackay in 1926, prior to the Partition of India. It is held by the National Museum, New Delhi



SECTION II

Upgrades in Data Collection Model to address Data Completeness

The registry has constantly been subject to improvement with the passage of time. The most recent addition to the online CRF is introduction of option for entry of bilateral simultaneous joint arthroplasty. The users do not have to enter everything and the system retrieves the patients information for the second side automatically. The surgeon can then modify data entries to select the type of implant used and any other variables that needs to be changed.

Data entries are constantly monitored for completeness and cleanliness of data and a three monthly review is carried out. Users are informed about missing entries or erroneous data entries and the data is periodically modified. Data entry is being facilitated by the hiring of even more data collection officers. We have fully functional data collection teams who regularly collect paper based CRF's from hospitals across the country. Our main centers are

1. Karachi
2. Lahore
3. Islamabad/Rawalpindi
4. Peshawar

PI training for entering data is an ongoing process. Most of our original users are now very comfortable with the data entry interface. New users are constantly being trained to use the interface properly.

Appendices:

1. Total Knee Arthroplasty CRF
2. Total Knee Arthroplasty Follow up Form
3. Total Hip Arthroplasty CRF
4. Total Hip Arthroplasty Follow up Form



PNJR No.....

1. PATIENT DETAILS

Surname Given Names
Female Male DOB Age
Weight.....(Kg) Height..... (Feet) 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

- Aseptic Loosening Tibia Femur
Osteolysis Tibia Femur
Infection
Instability Anteroposterior Varus / Valgus Multi Planar
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)

APPROACHES

- Medial Parapatellar
Sub Vastus
Mid vastus
Lateral Parapatellar
Quadriceps Snip
ETTO
Other

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

11. ADVERSE INTRA OPERATIVE EVENT

- Fracture Nerve Injury Patella Tendon Avulsion
Vascular Injury Ligament Injury Others



PNJR No.....

12. THROMBOPROPHYLAXIS

CHEMICAL NO Yes MECHANICAL NO Yes
LMWH Pentasaccharide Warfarin Foot Pump T.E.D Stocking
Direct Thrombin Inhibitor Aspirin Intermittent Calf Compression
Other 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..... 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 Seleeve Trabecular Metal Cone

A - FEMORAL COMPONENT

NONE FEMORAL STEM
Company Prosthesis Name.....
Cat/Ref #..... Size
Company Prosthesis Name.....
Cat/Ref #..... 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 labels or complete details by hand)

NONE All POLY BASE PLATE INSERT STEM

Company Prosthesis Name.....
Cat/Ref #..... Size
Company Prosthesis Name.....
Cat/Ref #..... Size

TIBIAL CEMENT: No Yes

CEMENT NAME:

TIBIAL AUGMENTS

Step Wedge Medial Lateral Full
Hemi Wedges Medial Lateral Full
Screws No Yes Number.....

C - PATELLA COMPONENT

No Yes

Company 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:



Date:...../...../.....

KNEE FOLLOW -UP FORM

PATIENT DETAILS

PNJR No

Surname Given Name CNIC #

Tel / Cell # Hospital Surgeon.....

Date of Surgery TKR (L/R) Hospital Reg. #

FOLLOW -UP VISIT

- 2 Weeks 6 Weeks 3 Months 6 Months
- 1 Year 5 Years 10 Years 15 Years
- 20 Years Others.....

FUNCTIONAL SCORE (0-100)

KNEE SOCIETY SCORE (0-100)

COMPLICATIONS

- Hematoma DVT PE
- Nerve Palsy Fracture Others
- Wound Dehiscence Infection

Surgeon Comments.....

.....

.....

Completed by:.....

Signature:



PNJR No.....

1. PATIENT DETAILS

Surname Given Names
Female Male DOB/...../..... Age
Weight.....(Kg) Height.....(Feet) 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)

Revision THA

R L
Diagnosis

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

Other (Specify)

10. ANAESTHESIA DETAILS

ASA GRADE

1 2 3 4

11. SURGICAL DETAILS

POSITION

Supine Lateral

INCISION

Standard MIS

DRAIN

No Yes

BONE GRAFT

No Yes

TYPE OF ANAESTHESIA

General Spinal Epidural

General + Epidural

Spinal + Epidural

APPROACHES

- Extended Trochanteric Osteotomy
Extensile Approach
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 No.....

14. ANTIBIOTIC

Generic Route Duration (Days)
1 I V / Oral
2 I V / 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 Dual Mobility

HEAD SIZE

22 28 32 36 Large head

BEARING SURFACE

Metal on poly Metal on crosslink poly Ceramic on poly Dual Mobility
Ceramic on ceramic Metal on metal Ceramic on crosslink poly

CEMENTED CUP

All poly Long posterior wall Constrained Dual Mobility

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 Dual Mobility
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-Schnider 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 Company
Prosthesis Name..... Prosthesis Name.....
Cat/Ref #..... Size Cat/Ref #..... Size

FEMORAL CEMENT:

No Yes
CEMENT NAME:

B - ACETABULUM COMPONENTS

No Yes
Company Company
Prosthesis Name..... Prosthesis Name.....
Cat/Ref #..... Size Cat/Ref #..... Size

ACETABULUM CEMENT:

No Yes
CEMENT NAME:

17. COMPUTER ASSISTED

No Yes System Used

18. POST-OP REHABILITAION PROTOCOL

Non weight bearing Full weight bearing Death.....

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

Signature:



Date:...../...../.....

HIP FOLLOW -UP FORM

PATIENT DETAILS

PNJR No

Surname Given Name CNIC #

Tel / Cell # Hospital Surgeon.....

Date of Surgery THR (L/R) Hospital Reg. #

FOLLOW -UP VISIT

- 2 Weeks 6 Weeks 3 Months 6 Months
- 1 Year 5 Years 10 Years 15 Years
- 20 Years Others.....

HARRIS HIP SCORE (0-100)

COMPLICATIONS

- Hematoma Wound Dehiscence Infection
- Dislocation DVT PE
- Nerve Palsy Fracture Others

Surgeon Comments.....
.....
.....

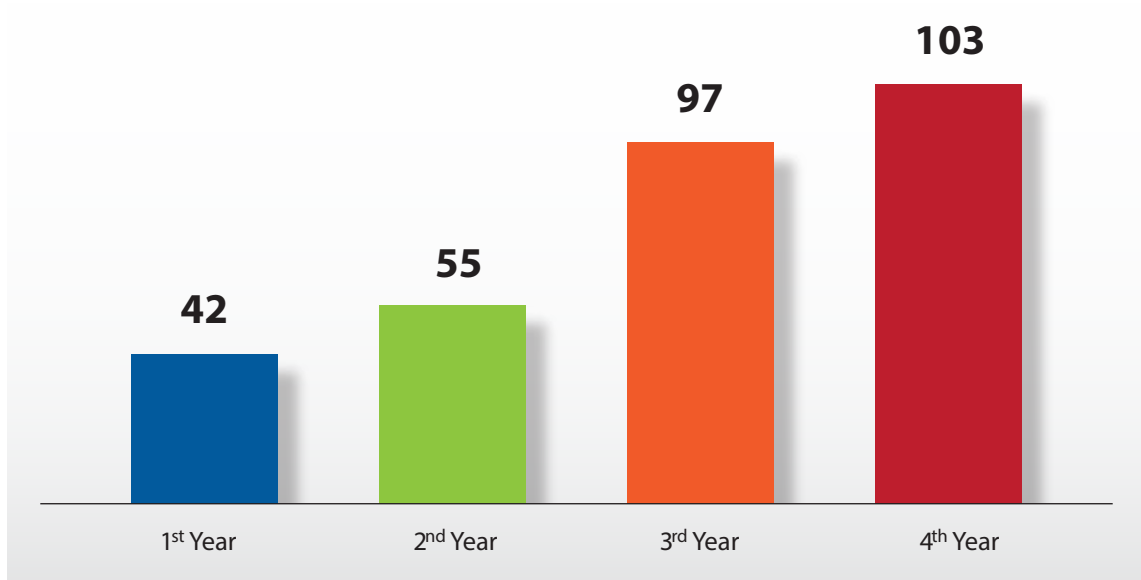
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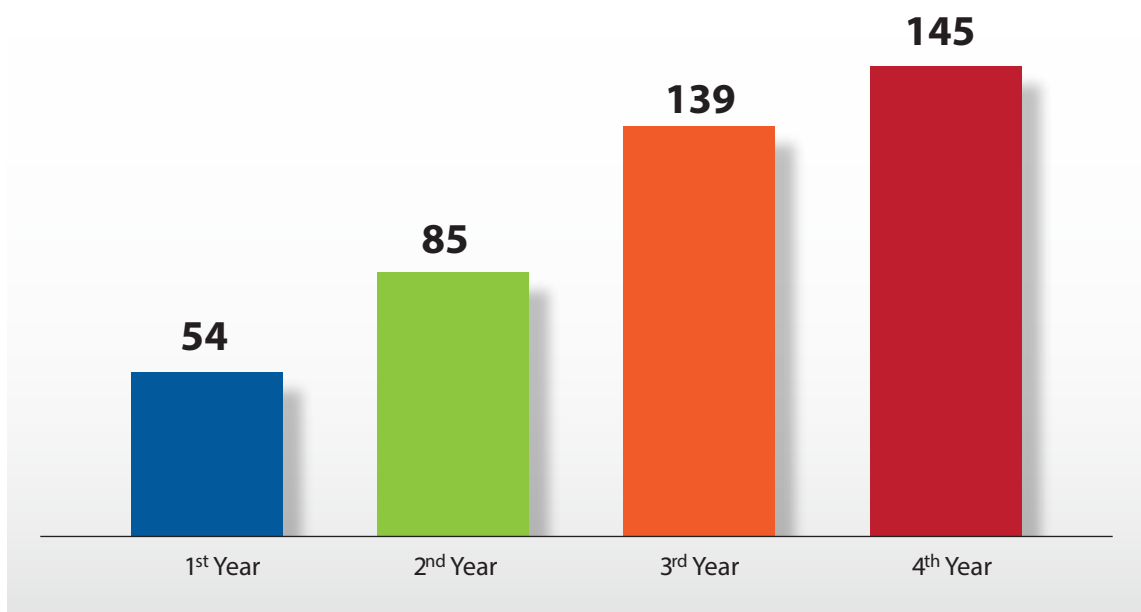
SECTION V

Upgrades in Data Collection

Growth in Number of Hospitals

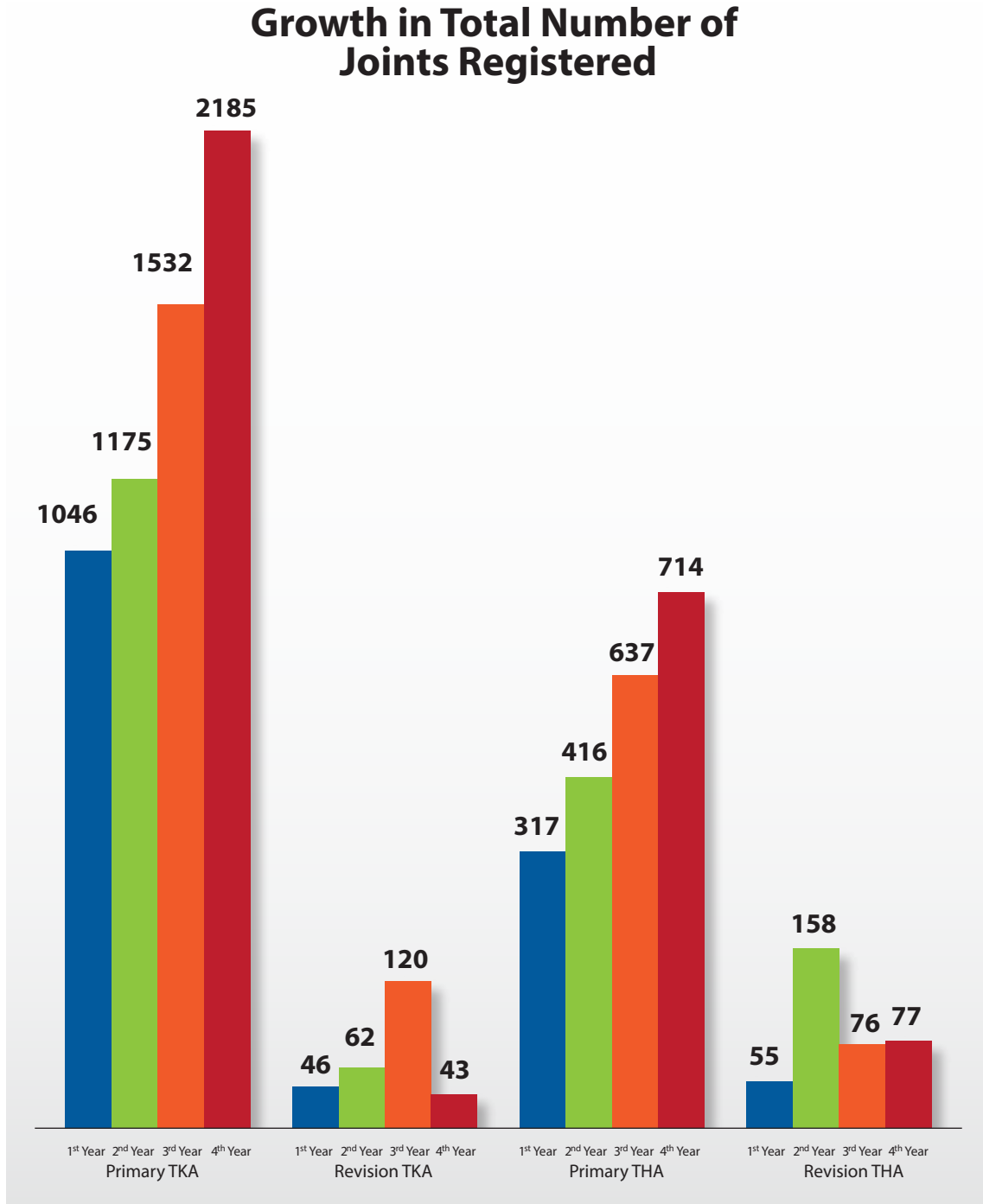


Growth in Number of PI's



SECTION III

Upgrades in Data Collection





Taxila

Located in Rawalpindi, Pakistan. Some of the earliest ruins can be dated back to the time of the Achaemenid Empire, 6th century BCE. The city is one of the best places for history buffs and it sits right next to the famous Grand Trunk Road; right on what was once the junction between South Asia and Central Asia. Because of its location, many emperors vied for its control and the city saw many rulers during the days of its peak. But when the trade routes connecting the regions lost their importance so did the city, and slowly fell to shambles. Finally the nomadic Hunas destroyed what was left in the 5th century. It was declared a UNESCO heritage site in 1980.

PNJR Clinical Coordinator Network

SECTION III



Unicorn seal

The Unicorn seal is the most famous seal of the Indus Civilization. They have been found as far as Oman. Merchants and traders used these seals as a method of exchanging goods. They were either traded or used as a stamp. The construction of the seals also indicates that some were even worn, by people as jewelry or as an indication of their status and rank. Various seals have been found over the years, and they provide an in-depth view of the Indus Civilization. They have also helped historians to determine how they communicated, the artistic skills that existed, trade contacts and relations, religious beliefs, and what they dressed like, and how they looked or portrayed themselves.

SECTION III

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

Mr. Faisal Farooq

Supporting Team



Mr. Syed Khalid Mansoor

Supporting Team



Dr. Hassan Asif

Supporting Team



Dr. Arif Muneer

Supporting Team



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Mr. Ali Hyder Qureshi

Supporting Team



Mr. Naeem Khan

Supporting Team





Dharmarajika Stupa

After the cremation of Buddha, originally his ashes were to go only to the Shakya clan, to which he belonged. However, six clans and a king, demanded the body relics. To avoid fighting, a Brahmin Drona divided the relics into ten portions. Later his relics were enshrined and worshipped in stupas by the royals of eight countries. The relics were later dug up by Ashoka, who is said to have divided it into 84,000 portions and had stupas built over them throughout the region he ruled. Dharmarajika stupa is land mark of Ashoka rule over Gandhara. This stupa is locally called "Cheer Top" in Taxila (Punjab-Pakistan). It was erected in the 3rd Century BCE and is the largest stupa in Pakistan indicating that this was once land of Buddhism.

PNJR
Partnership with HRAB

SECTION IV



Fasting Buddha Shakyamuni

This statue is from the Kushan Period (3rd – 5th Century) from Gandhara, Pakistan. After reaching enlightenment at Bodhgaya, Shakyamuni meditated and fasted for forty-nine days. Thus, showing him as an emaciated renouncer relates to his enlightenment and his status as a yogic ascetic who has ultimate control over his body. Other characteristics that relate to his enlightenment include the kusha grass on which he sits and the scene on the base, which shows the Buddha's first sermon, at Sarnath.

SECTION IV

PNJR Partnership with HRAB



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

The main objectives of HealthRAB are to:

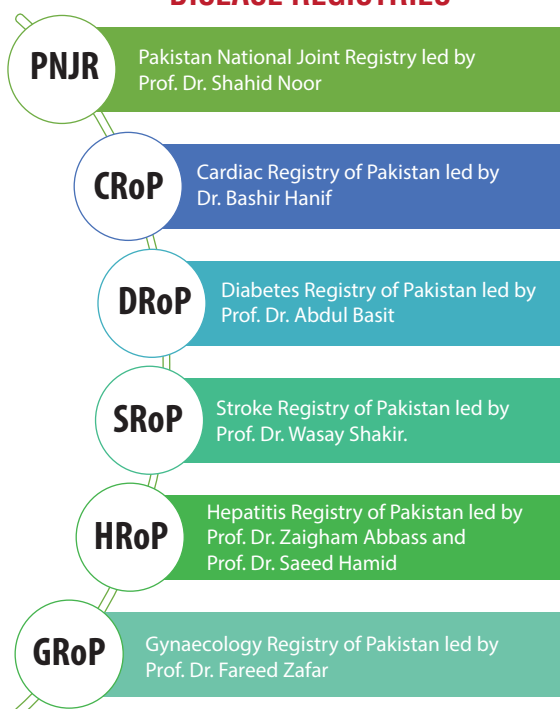
- Provide leadership for developing the medical research ecosystem of Pakistan
- Create synergy among the existing stakeholders and bring them together
- Build capacity of the healthcare professionals involved in conducting research
- Collaborate & network locally as well as globally to initiate research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

Projects & Activities:	
1	Online Research Course (ORC).
2	Research Reference Guide (RRG).
3	Research Assembly (RA).
4	National Research Policy Document.
5	Disease Registries.
6	MLS, RM and SPSS Workshops.
7	Research Webinars.
8	Clinical Research Center Workshop (CRC).
9	Student Chapters.
10	Research Fund (RF).

DISEASE REGISTRIES



SECTION IV

PNJR Partnership with HRAB



1st Research Excellence Award at CardioCon 2016 at Hotel Serena, Faisalabad on 25th -27th Nov, 16.



Poster Competition at 11th SAFOG Conference at Lahore on 17th - 19th March, 2017.



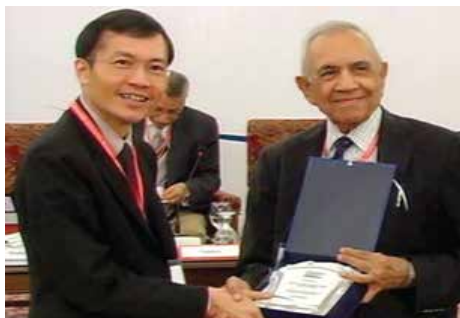
Clinical Research Center Workshop (CRCs) at Mohtarma Benazir Bhutto Medical College.



Joint Technical Working Group for Medical Research Activities



Webinar by Prof. Dr. Syed Shahid Noor held on 4th March, 17.



Prof. Dr. Abdul Ghaffar Biloo presenting shield to Prof. Dr. Lawrence



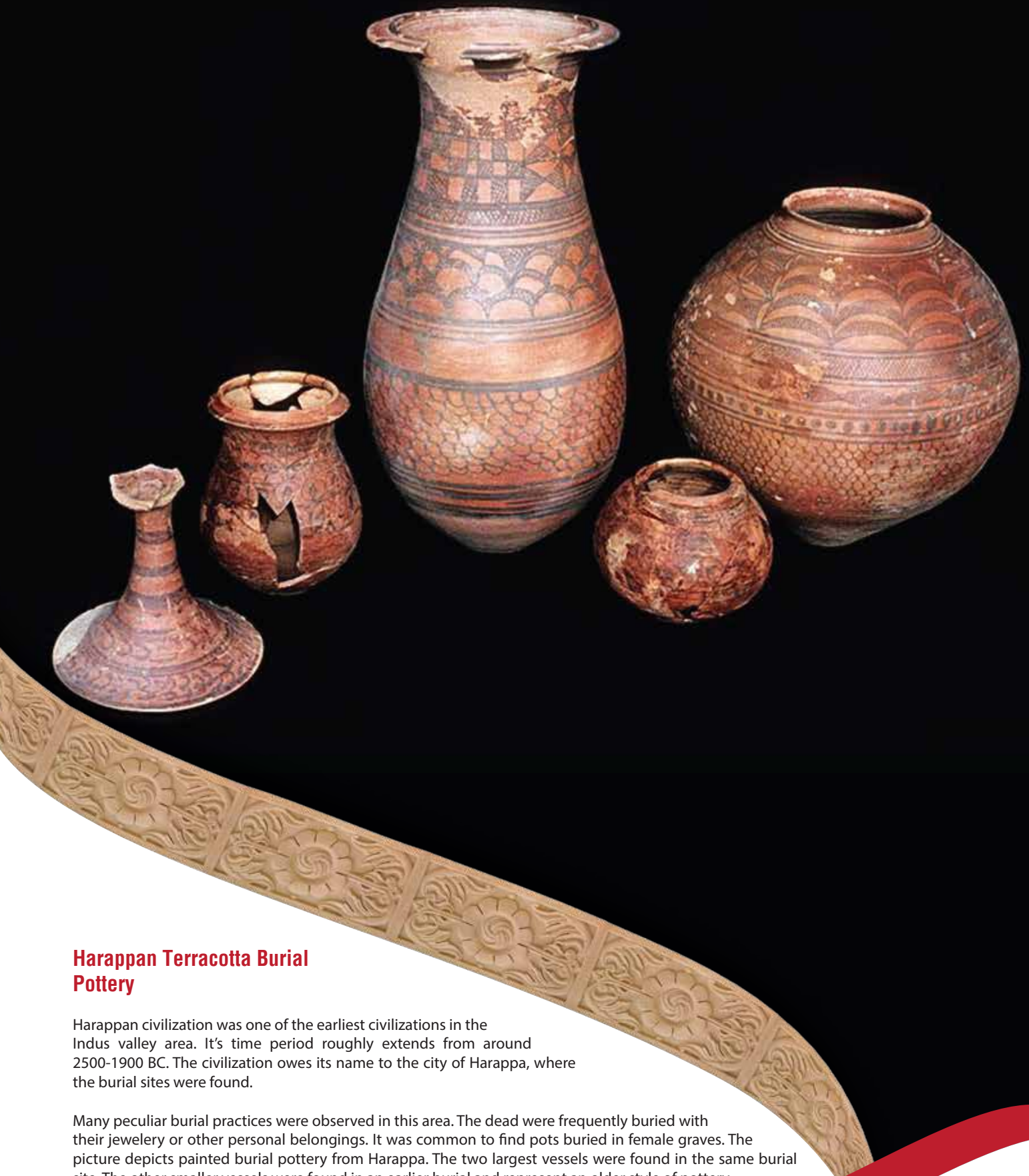
HealthRAB's Board Meeting



1st International Medical Research Conference - IMRC

PNJR
Stake Holders Network

SECTION V



Harappan Terracotta Burial Pottery

Harappan civilization was one of the earliest civilizations in the Indus valley area. It's time period roughly extends from around 2500-1900 BC. The civilization owes its name to the city of Harappa, where the burial sites were found.

Many peculiar burial practices were observed in this area. The dead were frequently buried with their jewelry or other personal belongings. It was common to find pots buried in female graves. The picture depicts painted burial pottery from Harappa. The two largest vessels were found in the same burial site. The other smaller vessels were found in an earlier burial and represent an older style of pottery.

SECTION V

PNJR Stake Holders 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

Karachi

1. Liaquat National Hospital & Medical College
2. The Aga Khan University and Hospital
3. The Indus Hospital
4. Institute of Orthopaedic & Surgery
5. Ziauddin University and Hospital Clifton
6. Jinnah Postgraduate Medical Centre
7. Civil Hospital, Dow University of Health Sciences
8. Abbasi Shaheed Hospital
9. Dow International Medical College, DUHS
10. Medicare Cardiac & General Hospital
11. South City Hospital
12. AO Clinic
13. Ashfaq Memorial Hospital
14. Combined Military Hospital
15. Darul Sehat Hospital
16. National Medical Center
17. Orthopaedic & Medical Institute OMI
18. Fatimiyah Hospital
19. Hamdard Hospital
20. TO Clinic
21. Hill Park General Hospital
22. Jinnah Medical & Dental Hospital
23. KPT Hospital
24. Ankle Saria Hospital
25. Mamji Hospital
26. Burhani Hospital
27. Memon Medical Institute Hospital
28. Neurospinal & Cancer Care Institute
29. Park Lane Hospital

SECTION V

PNJR Stake Holders Network

30. Patel Hospital
31. PNS Shifa – Bahria University Medical & Dental College
32. Saifee Hospital
33. Karachi Adventist Hospital (7th Day Hospital)
34. Zubaida Medical Centre
35. The SNBB Truma Centre
36. Imam Clinic
37. Lyari General Hospital
38. Aiwan-e-Tijarat-o-Sanat Hospital Trust
39. Dr. Ziauddin Hospital (North)

Hyderabad

40. Bone and Joints Hospital

Larkana

41. Chandka Medical College & Shaheed Benazir Bhutto Medical Institute

Nawabshah

42. Nawabshah Medical College & Hospital
43. Shafique Medical Center
44. Mastoi Medicare

Sukkur

45. Bhatti Hospital
46. Sukkur Blood Bank Hospital

Punjab

Lahore

47. Ghurki Trust Teaching Hospital
48. King Edward Medical University (KEMU)
49. Combine Military Hospital
50. Doctors Hospital
51. Shalamar Medical College
52. Jinnah Hospital
53. Allama Iqbal Medical College
54. Lahore General Hospital
55. Sheikh Zayed Hospital
56. Shoukat Khanum Hospital
57. Services Institute of Medical Sciences (SIMS)
58. Horizon Hospital

59. Sir Ganga Ram Hospital
60. Masood Hospital
61. Govt. Nawaz Sharif Hospital
62. Family Hospital
63. Mid City Hospital Jail Road
64. National Hospital Defence Lahore
65. Services Hospital
66. Wapda Teaching Hospital

Islamabad / Rawalpindi

67. Shifa International Hospital
68. Quaid-e-Azam International Hospital
69. Combined Military Hospital
70. Shaheed Zulfiqar Ali Bhutto Medical University
71. Kulsum International Hospital
72. Ali Medical Centre
73. Maroof International
74. NESCOM Hospital
75. KRL Hospital
76. Benazir Bhutto Hospital
77. Capital Hospital
78. DHQ Hospital
79. Fauji Foundation Hospital
80. National Institute of Rehabilitation Medicine
81. OGDCL Medical Centre
82. Rawalpindi Medical College

Multan

83. Nishtar Medical College & Hospital
84. Combined Military Hospital
85. Fatima Medical Center

Bahawalpur

86. Bahawal Victoria Hospital
87. Cheema Hospital

Faisalabad

88. Allied Hospital

SECTION V

PNJR Stake Holders Network

Gujranwala

89. Chattha Hospital
90. District Head Quarter Hospital
91. Med Care Hospital

Sialkot

92. Combined Military Hospital

Kharian

93. Combined Military Hospital

Rahim Yar Khan

94. Sheikh Zayed Medical College and Hospital

Khyber Pakhtunkhwa

Peshawar

95. Hayatabad Medical Complex
96. Khyber Teaching Hospital
97. North West General Hospital, Hayatabad
98. Rehman Medical Institute
99. Aman Hospital, Civil Quarters

Abbottabad

100. Ayub Medical College

Baluchistan

Quetta

101. Bolan Medical College
102. Doctors Hospital
103. Akram Hospital

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

Karachi

1. Prof. Syed Shahid Noor
2. Prof. Muhammad Umar
3. Prof. Zaki Idrees
4. Prof. Muhammad Amin Chinoy
5. Prof. Mansoor Ali Khan
6. Prof. Anisuddin Bhatti
7. Prof. Maratib Ali
8. Prof. Pervez Anjum
9. Prof. Intikhab Taufiq
10. Prof. Imtiaz Ahmed Hashmi
11. Prof. Syed Kamran Ahmad
12. Prof. Ghulam Mustafa Kaim Khani
13. Prof. Asif Qureshi
14. Prof. A R Jamali
15. Dr. Masood Umer
16. Dr. Riaz Hussain Lakdawala
17. Dr. Pervaiz Hashmi
18. Dr. Sharyar Noordin
19. Dr. Mujahid Jamil
20. Dr. Nasir Ahmad
21. Dr. Aslam Pervez
22. Dr. Imran Ali Shah
23. Dr. Sohail Rafi
24. Dr. Tashfeen Ahmed
25. Dr. M. Ather Siddiqi
26. Dr. M. Asif Peracha
27. Dr. Syed Amir Ali Shah
28. Dr. S. Ghazanfar Ali Shah
29. Dr. M. Kazim R. Najjad
30. Dr. Muhammad Sufyan
31. Dr. Arshad Qamar
32. Dr. Idrees Shah
33. Dr. Farooq Mamji
34. Dr. Iqbal Malik
35. Dr. Syed Itaat Zaidi
36. Dr. Syed Muhammad Khalid Karim

SECTION V

PNJR Stake Holders Network

37. Dr. Lt. Col Waris Ali Shah
38. Dr. Lt. Col Syed Faraz Anwar
39. Dr. Mirza Mohsin Ali Jah
40. Dr. Jagdesh Kumar
41. Dr. Arshad Jamil
42. Dr. Akram M. Aliuddin
43. Dr. Syed Danish Ali
44. Dr. Sabih Nasar

Hyderabad

45. Dr. Rais Parvaiz

Larkana

46. Prof. Asadullah Mahar
47. Dr. Zamir Soomro
48. Dr. Azizullah Bhayo
49. Dr. Abdul Malik Shaikh

Nawabshah

50. Prof. Zulfiqar Ali Mastoi
51. Dr. Saeed Samo

Sukkur

52. Prof. Anisuddin Bhatti
53. Dr. Zulfiqar Ali Soomro
54. Dr. Sohail Jokhyo

Punjab

Lahore

55. Prof. Ghazanfar Ali Shah
56. Prof. Amer Aziz
57. Prof. S. Muhammad Awais
58. Prof. Abu Bakar Siddiq
59. Prof. Rana Dilawaiz Nadeem
60. Brig. Prof. Sohail Amin
61. Prof. Muhammad Abdul Wajid
62. Prof. Naeem Ahmed
63. Prof. Shahzad Javed
64. Prof. Irfan Mehboob
65. Prof. Yawar Anis

66. Prof. Shafique Ahmad Shafaq
67. Prof. Rana M. Arshad
68. Prof. Ali Raza Hashmi
69. Prof. Tahseen Riaz
70. Dr. Ahsan Shamim
71. Dr. Mian Muhammad Hanif
72. Dr. Faisal Qamar
73. Dr. Syed Kashif Mehdi
74. Dr. Sher Afgan
75. Dr. Rizwan Akram
76. Dr. Muhammad Naveed
77. Dr. Muhammad Akhtar Malik
78. Dr. Mohammad Fahim Iqbal
79. Dr. Khurram Sadat
80. Dr. Javed Iqbal
81. Dr. Ijaz Ahmad
82. Dr. Faisal Masood
83. Dr. Atiquz Zaman
84. Dr. Abdullah Shah
85. Dr. Rashid

Islamabad / Rawalpindi

86. Prof. Maj. Gen. Sohail Hafeez
87. Prof. Khalid Aslam
88. Prof. Riaz Ahmed Shaikh
89. Prof. Nayyar Qayyum
90. Prof. Muhammad Salim
91. Brig. Dr. Syed Arsalan Haider Bukhari
92. Dr. Aamir Nabi Nur
93. Dr. Farid Ullah Khan Zimri
94. Dr. Irfan Masood
95. Dr. Syed Shujaat Ali Shah
96. Dr. Shaheen Iqbal
97. Dr. Sajjad Orakzai
98. Dr. Rizwan Hameed Malik
99. Dr. Riffat Mehmood
100. Dr. Nouman Maqbool
101. Dr. Moghees Ikram Ameen
102. Dr. Ali Shami
103. Dr. Ali Khokhar
104. Dr. Ali Akhter

SECTION V

PNJR Stake Holders Network

105. Dr. Abidullah Khan Niazi
106. Dr. Obaid-ur-rehman
107. Dr. Asim Niaz Naqvi
108. Dr. Abdul Basit
109. Dr. Syed Sajid Hussain
110. Dr. Faheem Khan

Multan

111. Dr. Khalil Ahmed Gill
112. Dr. Col. Sohail Muzammil
113. Dr. Mohammad Kamran Siddiqi
114. Dr. Muhammad Jehangir Riaz

Bahawalpur

115. Prof. Tehseen Cheema
116. Prof. Rafiq Sabir
117. Dr. Hafiz Muhammad Akram

Faisalabad

118. Prof. Ajmal Yasin
119. Dr. Khurram Habib

Gujranwala

120. Dr. Hafiz Ahmad Fayyaz
121. Dr. Ahmed Masood Ghuman
122. Dr. Faisal Iqbal Chaudhry

Sialkot

123. Dr. Shahid Munir

Kharian

124. Dr. Nisar Ahmed

Rahim Yar Khan

125. Prof. Muhammad Azeem
126. Dr. Abdul Rauf Chaudhry

Khyber Pakhtunkhwa

Peshawar

127. Prof. Zafar Durrani
128. Prof. Muhammad Arif Khan
129. Prof. Zahid Askar
130. Prof. Raja Irfan Qadir
131. Prof. Khushnood Ali Baz
132. Prof. Malik Javed
133. Prof. Ayaz Khan
134. Dr. Zeeshan Khan
135. Dr. Syed Imran Bukhari
136. Dr. Israr Ahmad
137. Dr. Ghulam Atiq
138. Dr. Awal Hakeem
139. Dr. Waseem Anwer

Abbottabad

140. Dr. Alamzeb Khan

Baluchistan

Quetta

141. Prof. Qazi Masood
142. Dr. Saleh Muhammad Tareen
143. Dr. Muhammad Baksh Shahwani
144. Dr. Attiq Ur Rehman
145. Dr. M. Tariq Hasni



SECTION V

PNJR Stake Holders Network



Implant Suppliers

1. Zimmer Biomet
2. Depuy Synthes (JnJ)
3. United Orthopaedics
4. Smith and Nephew
5. Microport
6. Implantcast
7. Biomet
8. Surgival
9. Samo
10. Waldemar Link
11. Tipmed
12. Irene
13. Corin
14. AK Medical

Promising Future and Broadening Horizons

SECTION VI



Mehrgarh Balouchistan

These houses were built by Mehrgarh dwellers. 8000 years BC. The first civilized, urban settlement on face of this earth. It is a Neolithic site located near the Bolan Pass on the Kacchi Plain of Balochistan, Pakistan, to the west of the Indus River valley. It is one of the earliest sites with evidence of farming and herding in South Asia. The site was discovered in 1974 by an archaeological team led by French archaeologists Jean-François Jarrige and Catherine Jarrige, and was excavated continuously between 1974 and 1986, and again from 1997 to 2000. Archaeological material has been found in six mounds, and about 32,000 artifacts have been collected. Mehrgarh is now seen as a precursor to the Indus Valley Civilization, displaying the whole sequence from earliest settlement and the start of agriculture, to the mature Harappan Civilisation.

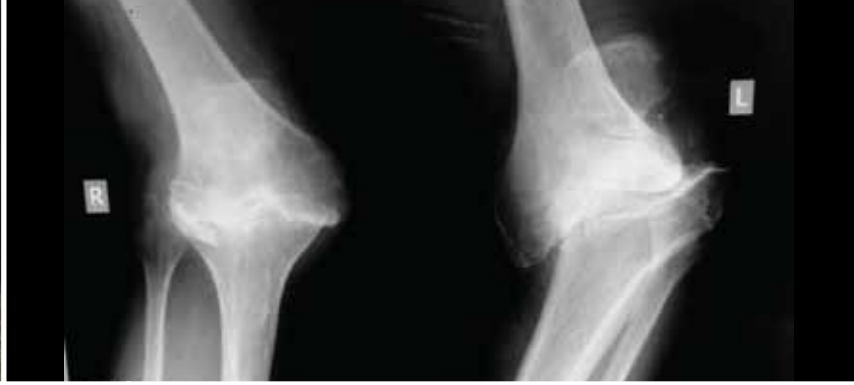
Promising Future and Broadening Horizons

The Pakistan National Joint registry besides being a registry and a success model in our healthcare system is an inspiration to our healthcare providers. We have proven beyond doubt that where there is a will there is a way. It is a matter of immense pride for us that we are amongst the list of the elite few countries who have achieved to establish joint registries. Most of the other countries in this list being from the developed western world. We believe that the effect of this registry reach far beyond the realm of joint replacement surgery. It is the guiding beacon for a brighter future and will help not only itself and it's parent Pakistan Arthroplasty Society to grow but will keep bearing fruit for many generations of surgeons and other healthcare providers to come.

In future, the steering committee has the following vision for the growth of the PNJR.

1. Automated entry of implant data using bar code readers. The pilot of this is already in place and entries are being performed using bar code readers in few high volume centers.
2. Automatically generated performance reports on monthly and quarterly basis that will be accessible to users and the steering committee on as need basis for monitoring and quality assurance.
3. Establishment of a quality control and monitoring cell. With the ever increasing number of users, and upgradation of the registry, a monitoring unit is essential to ensure that the data being entered is of sufficient quality to merit analysis. Without this we believe that the registry will cease to have scientific value over time.
4. Elevating the status of PNJR to a compulsory national register. Currently we are a voluntary registry. The next step is to get government approval for conversion of this project to a national government run and funded compulsory registry. This will elevate not only the status but the credibility of the data and we would then truly represent all joint surgeons in Pakistan.

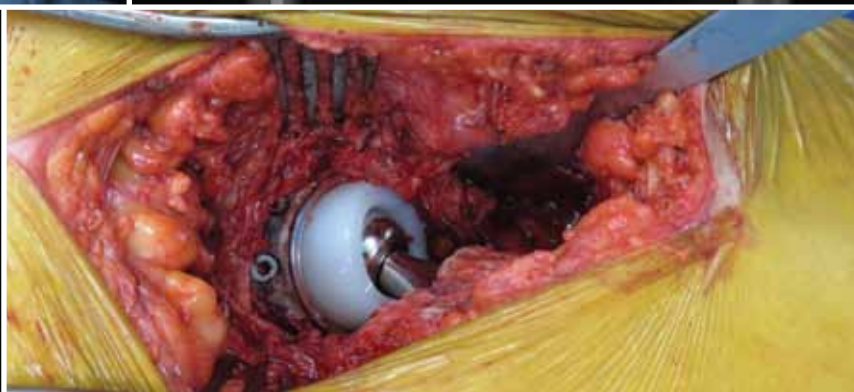
We sincerely hope and pray that other health care professions and other developing sister national and regional organizations come up with plans to start their own registries. On the same model that we have helped other specialties at a national level to establish their own registries in Pakistan, we would be more than willing to share our experience and expertise with other national organizations to establish theirs as well.



Data Analysis and Reporting

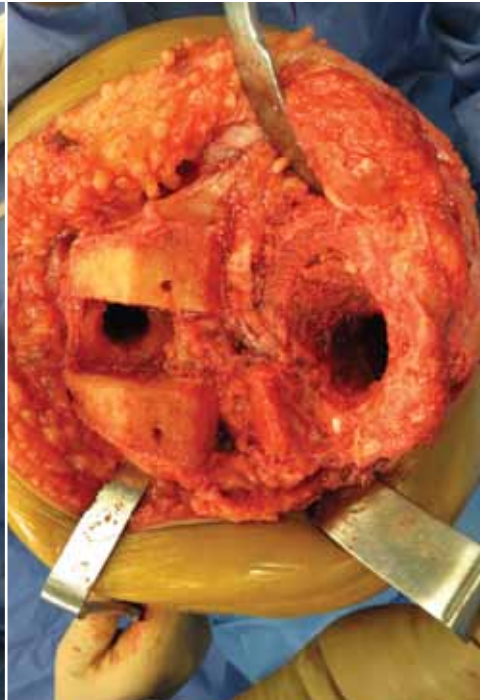
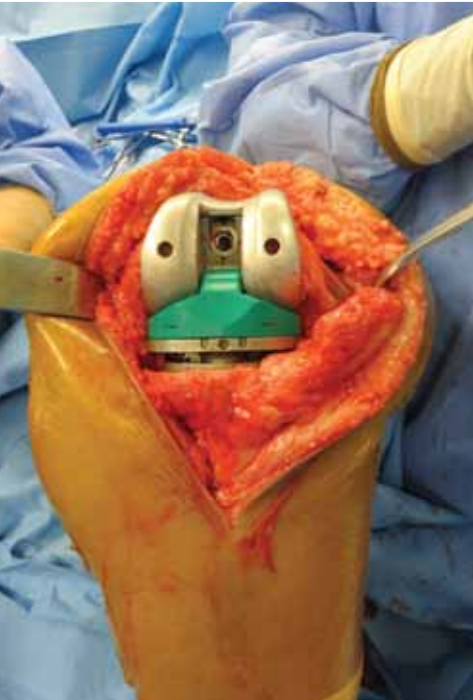
PART 2

PNJR 4th Annual Report



Primary Total Knee Arthroplasty

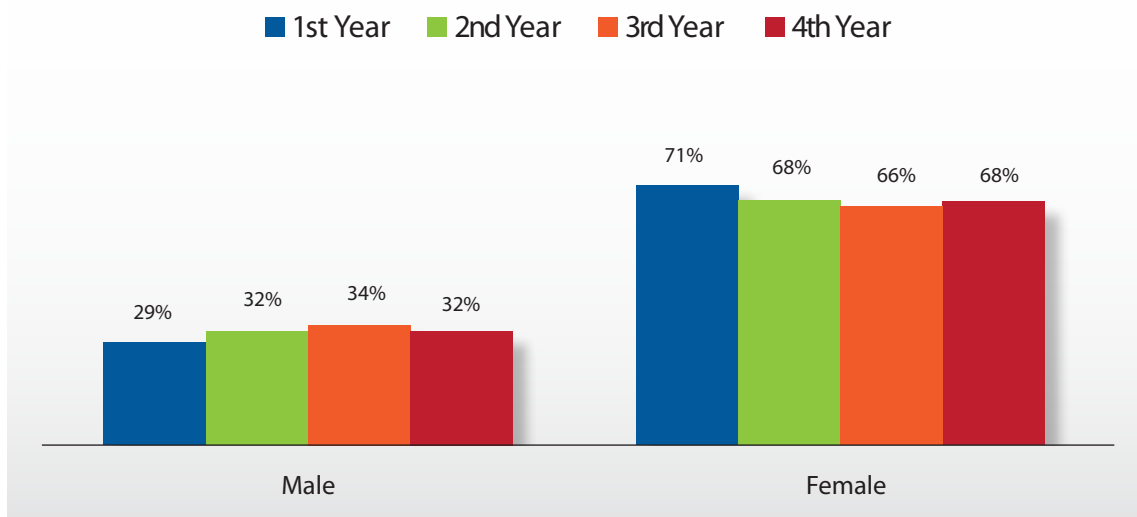
SECTION I



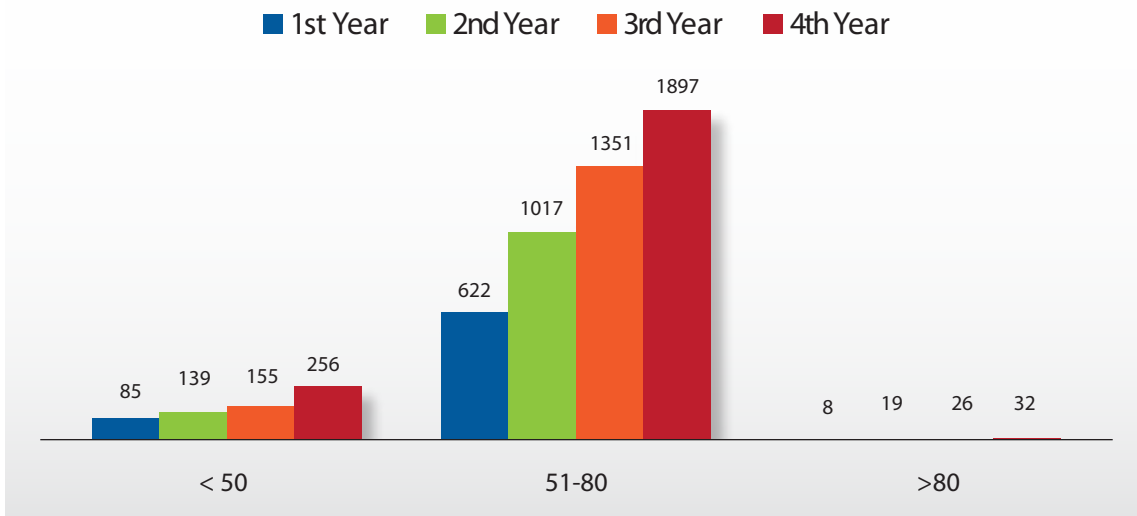
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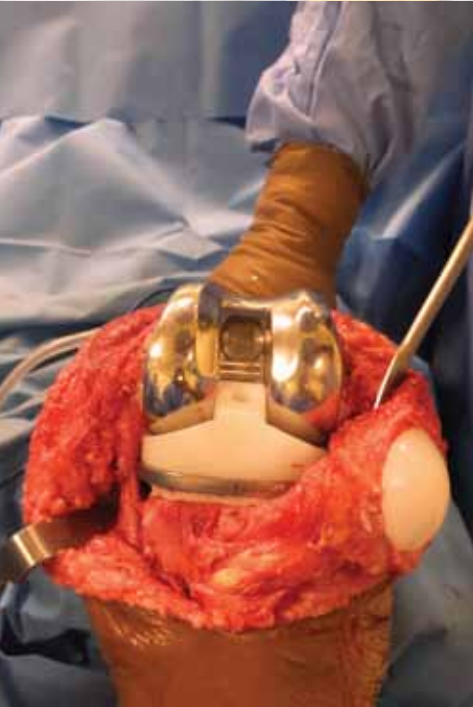
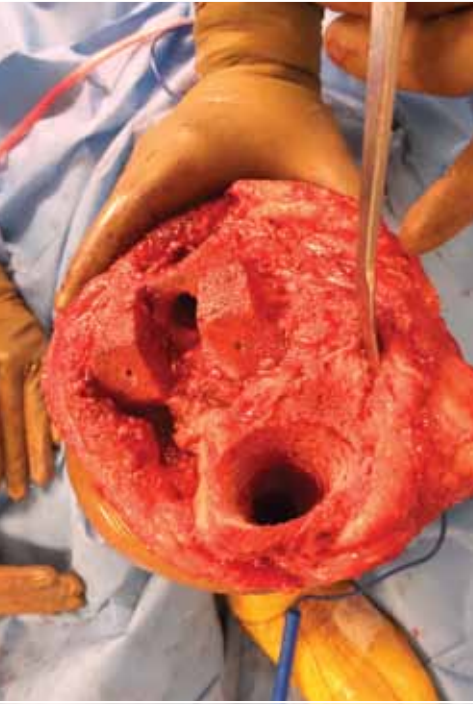
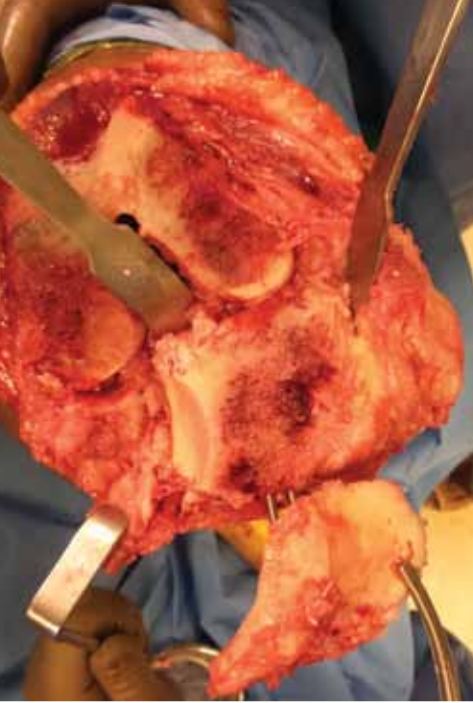
Primary Total Knee Arthroplasty

Gender Distribution



Age Category

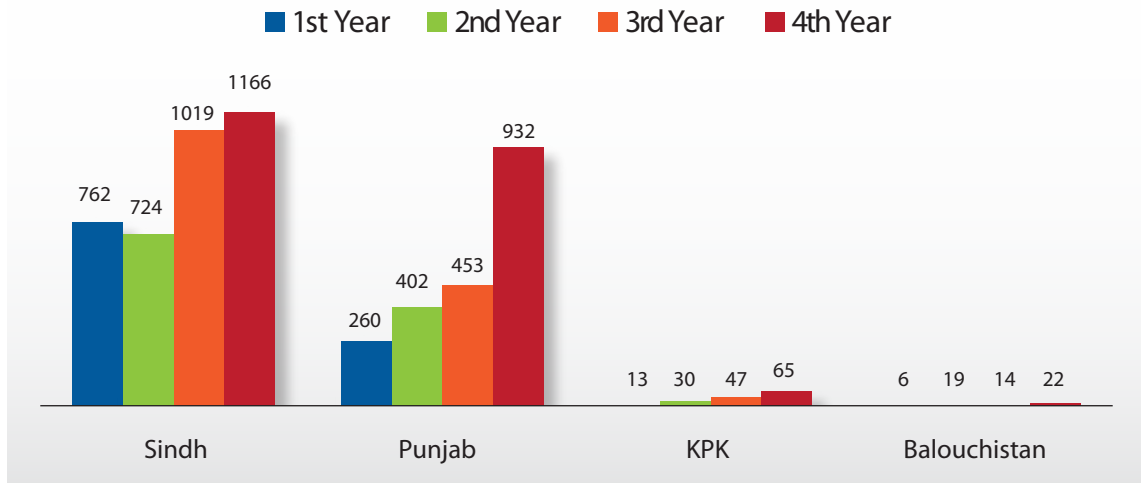




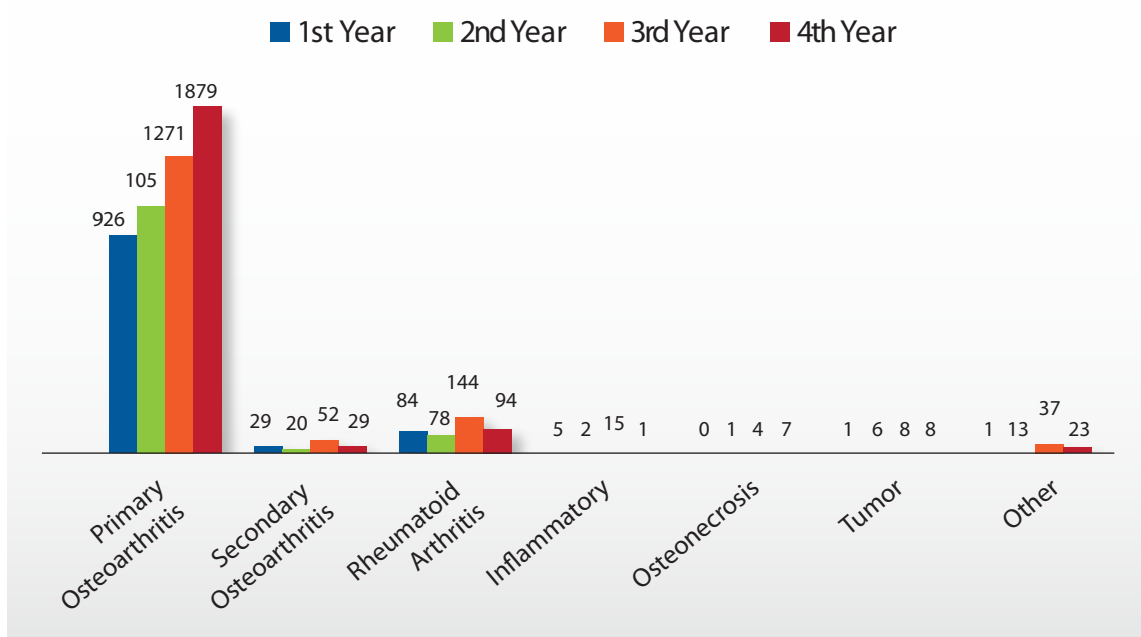
SECTION I

Primary Total Knee Arthroplasty

Geographical Distribution



Diagnosis



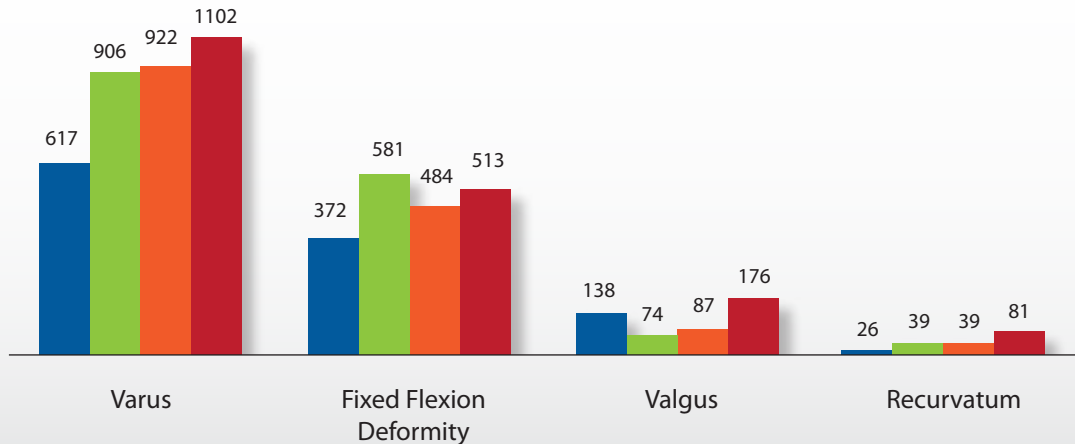


SECTION I

Primary Total Knee Arthroplasty

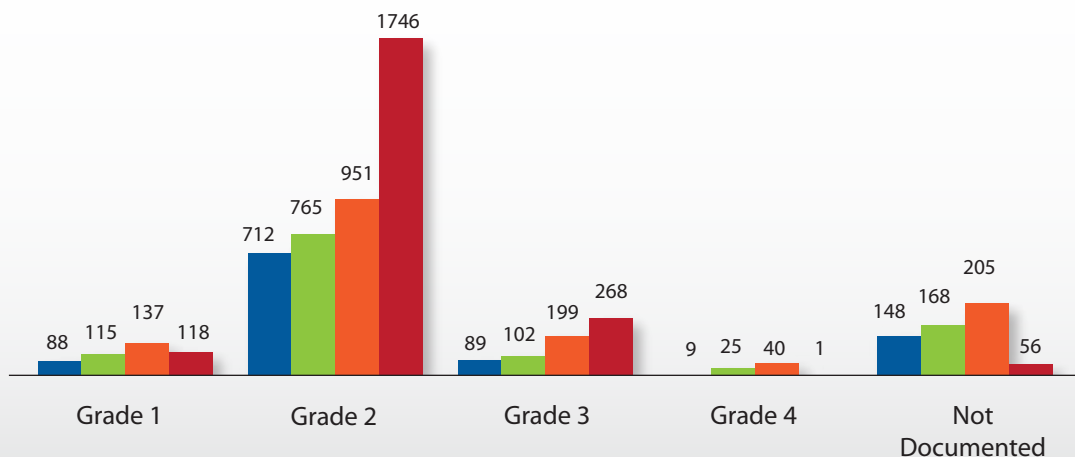
Pre-operative deformity

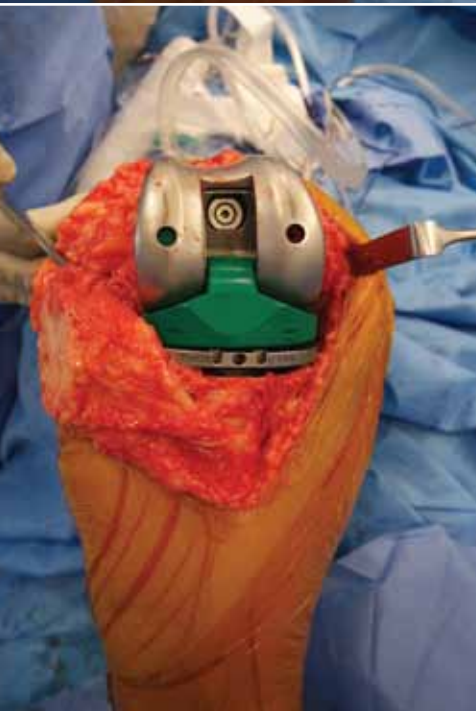
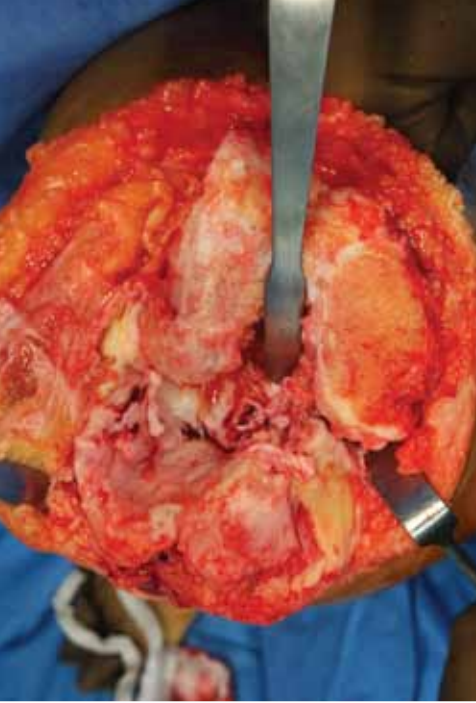
■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year



ASA Grading

■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year

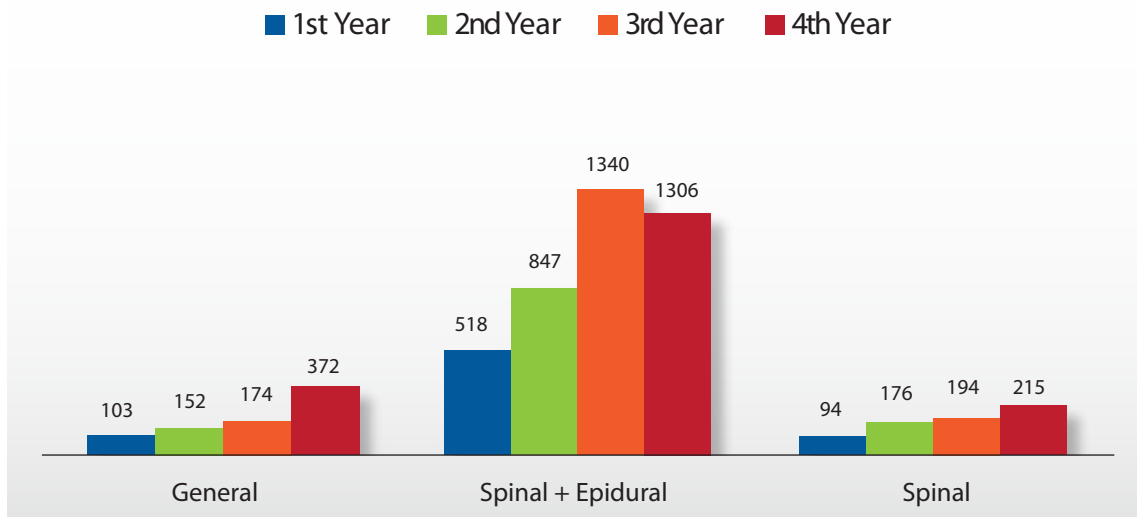




SECTION I

Primary Total Knee Arthroplasty

Anaesthesia



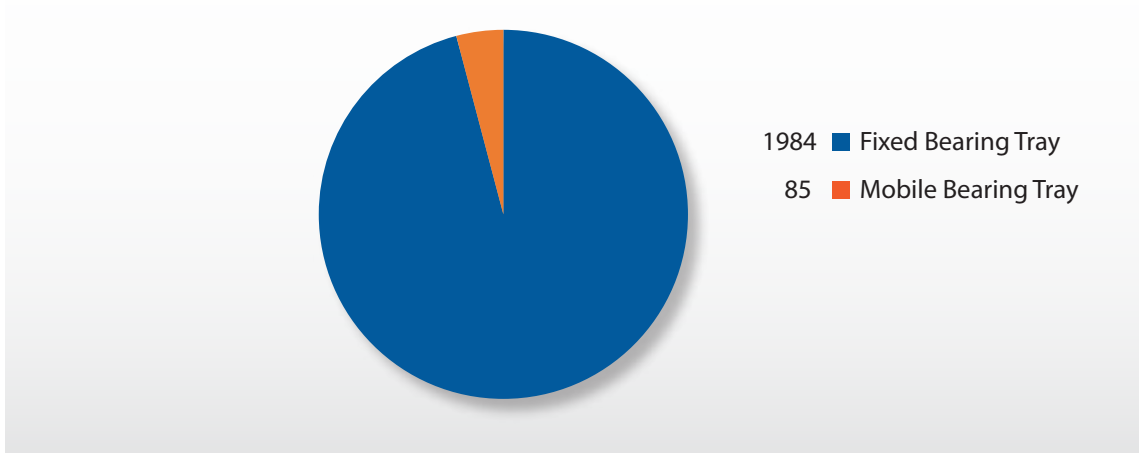
Implant Types according to level of constraint



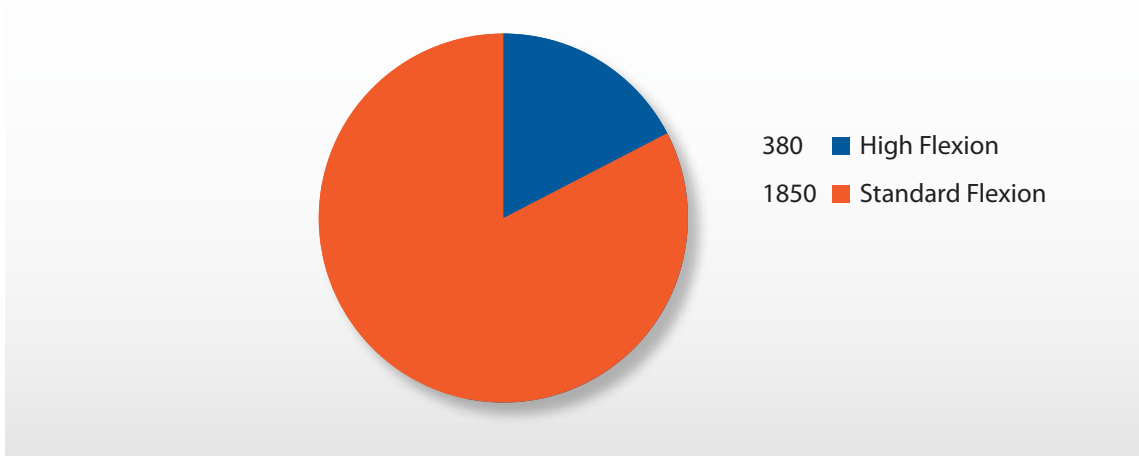
SECTION I

Primary Total Knee Arthroplasty

Implant Types according to Fixation of Tibial Insert



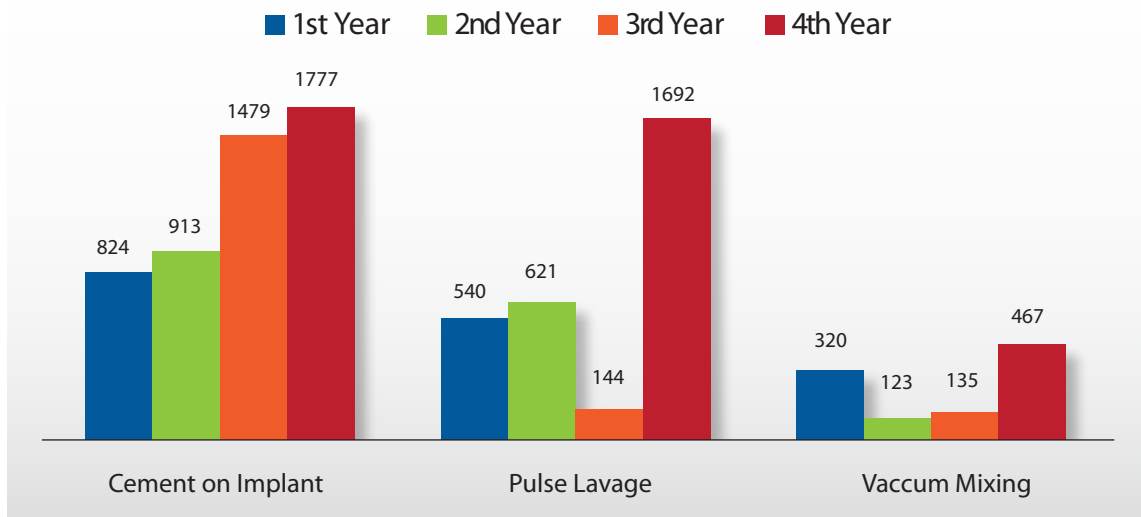
Implant Types according to built in flexion



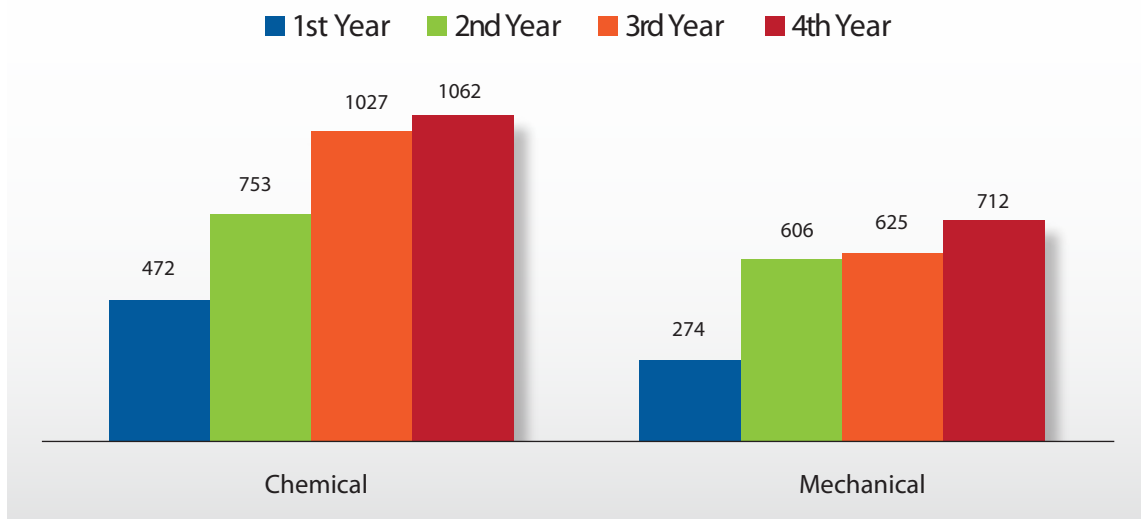
SECTION I

Primary Total Knee Arthroplasty

Cementing Techniques



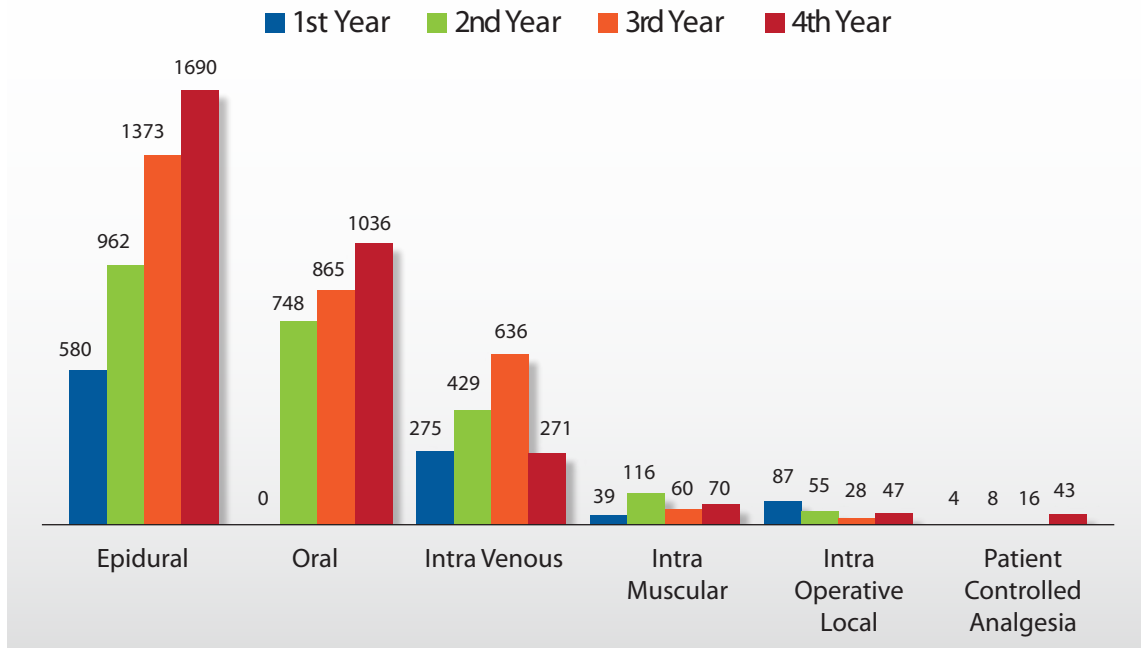
Thromboprophylaxis



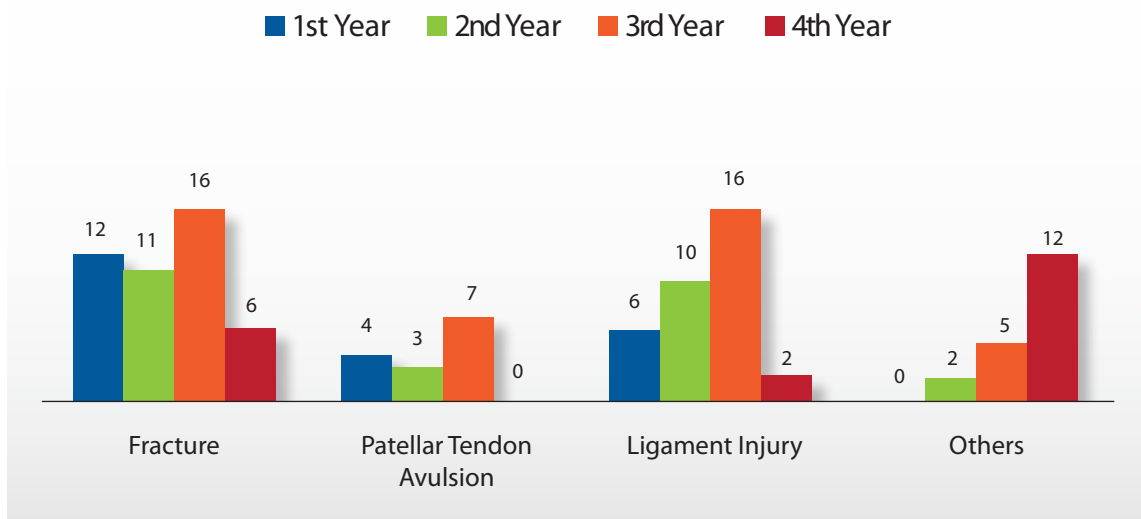
SECTION I

Primary Total Knee Arthroplasty

Post operative Analgesia



Adverse intraoperative events

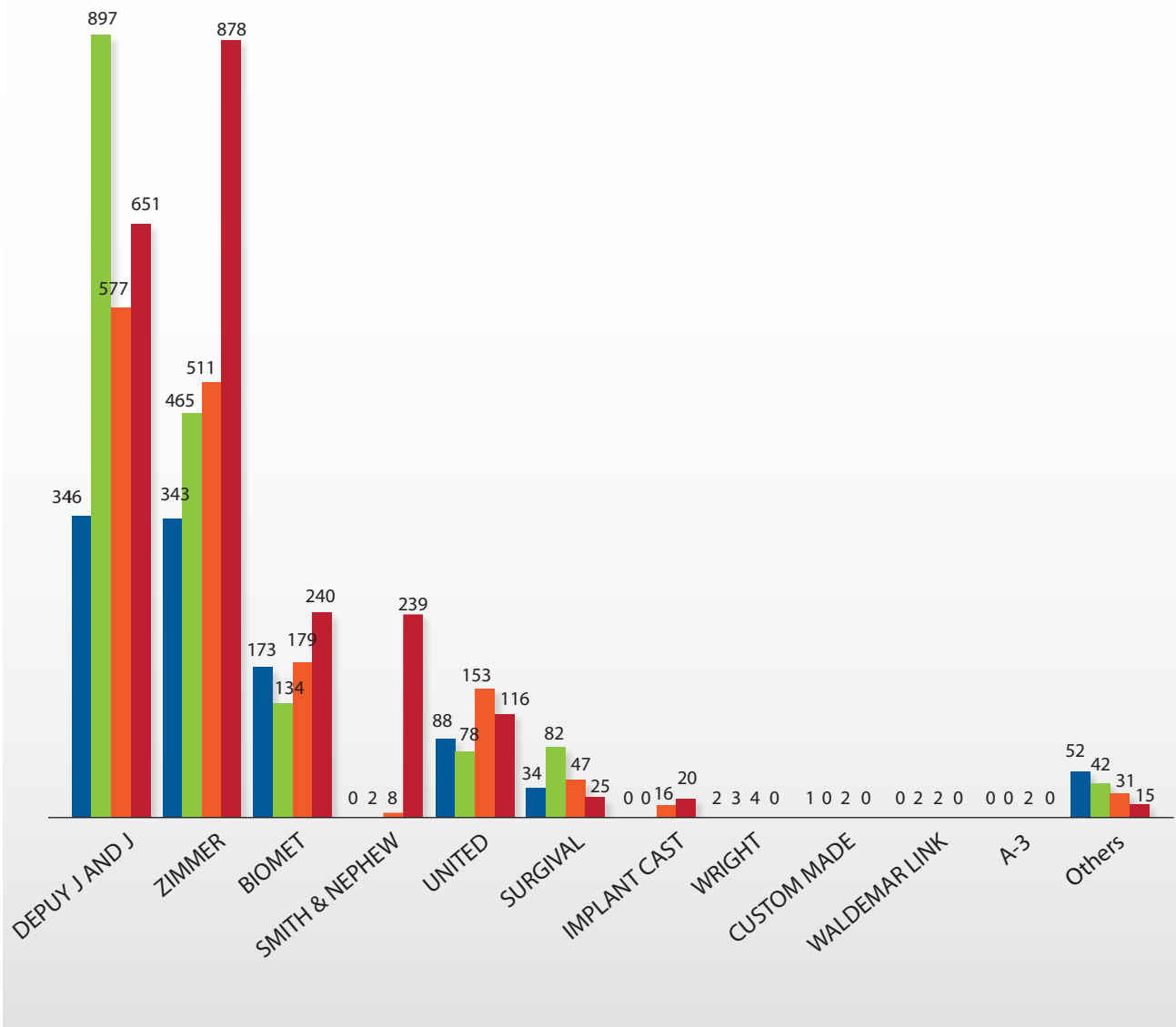


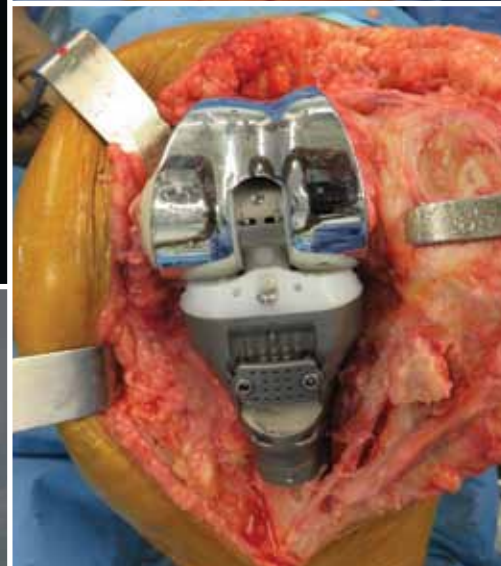
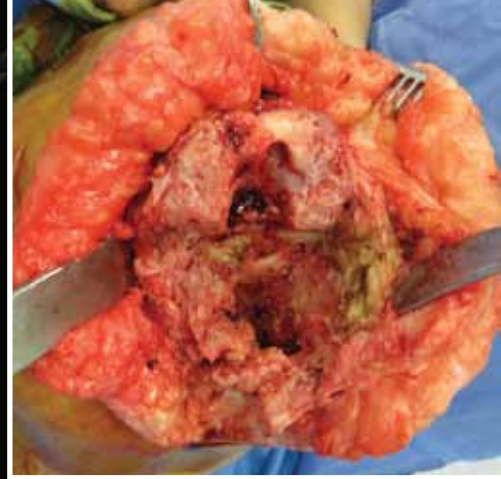
SECTION I

Primary Total Knee Arthroplasty

Implant Details

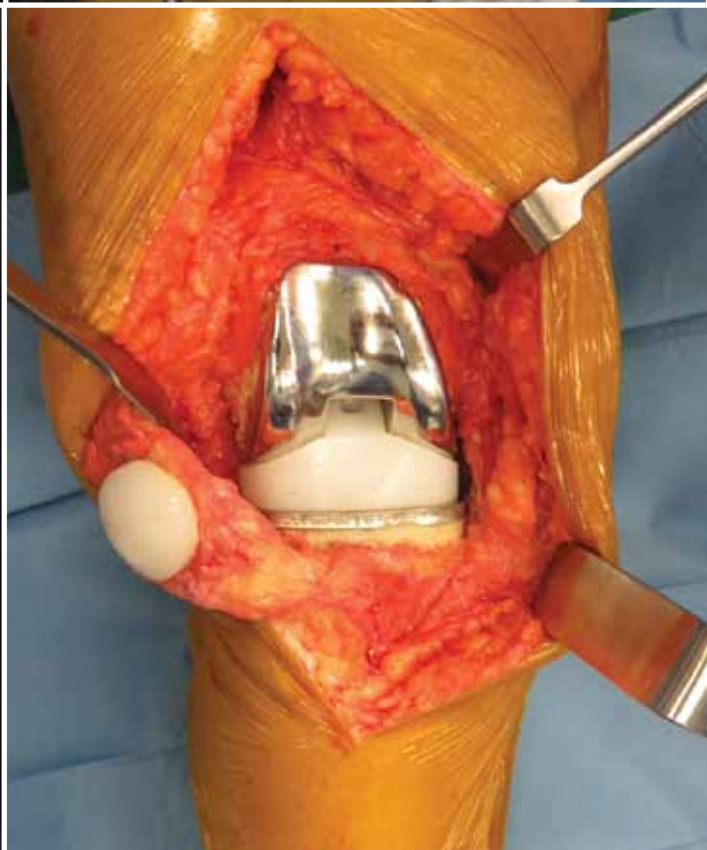
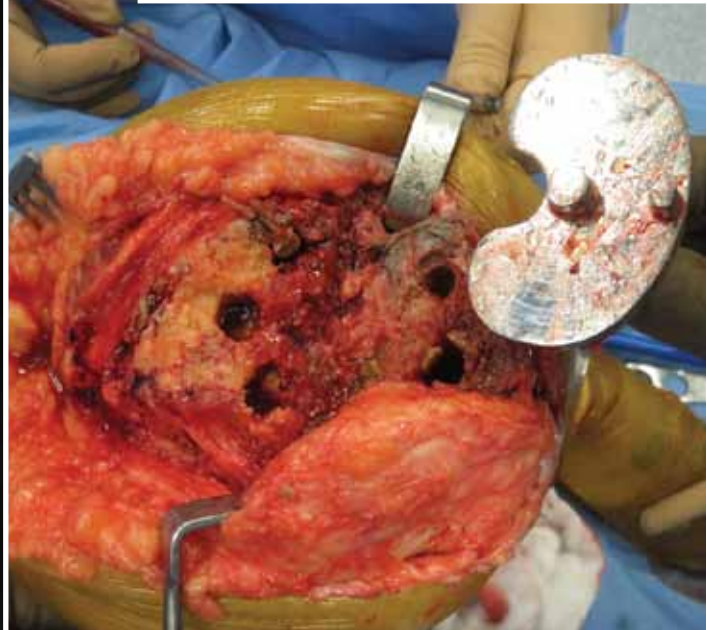
■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year





Revision Total Knee Arthroplasty

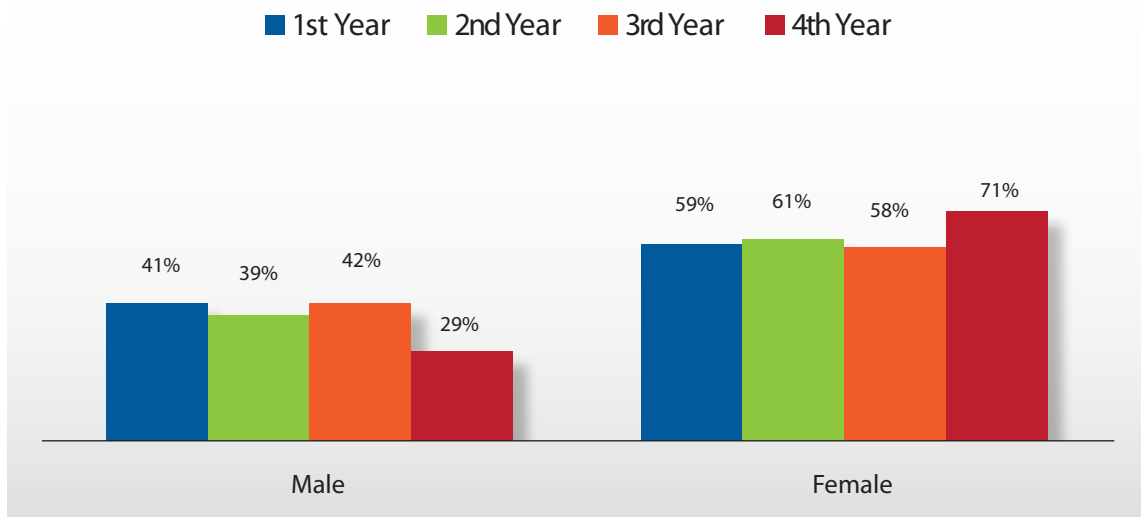
SECTION II



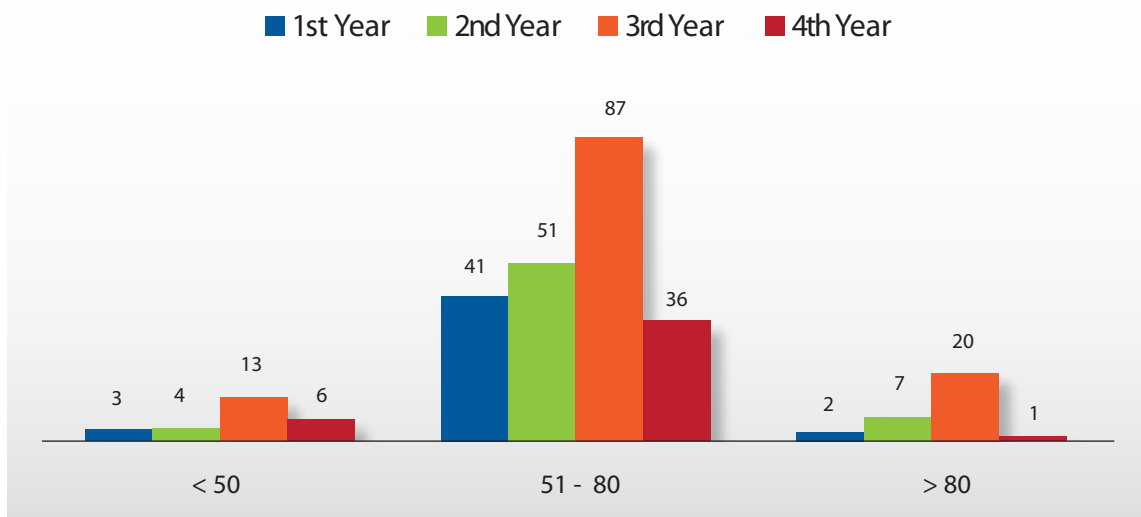
SECTION II

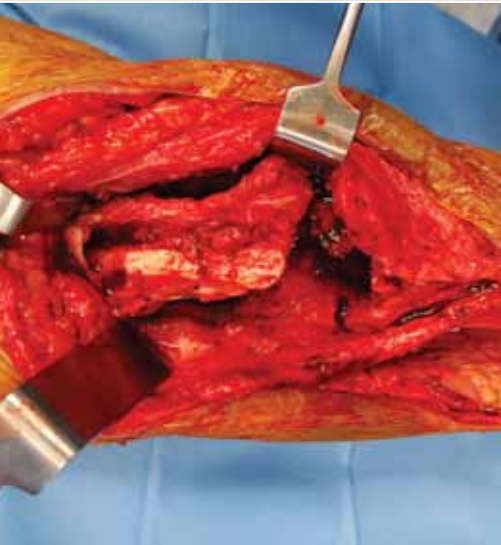
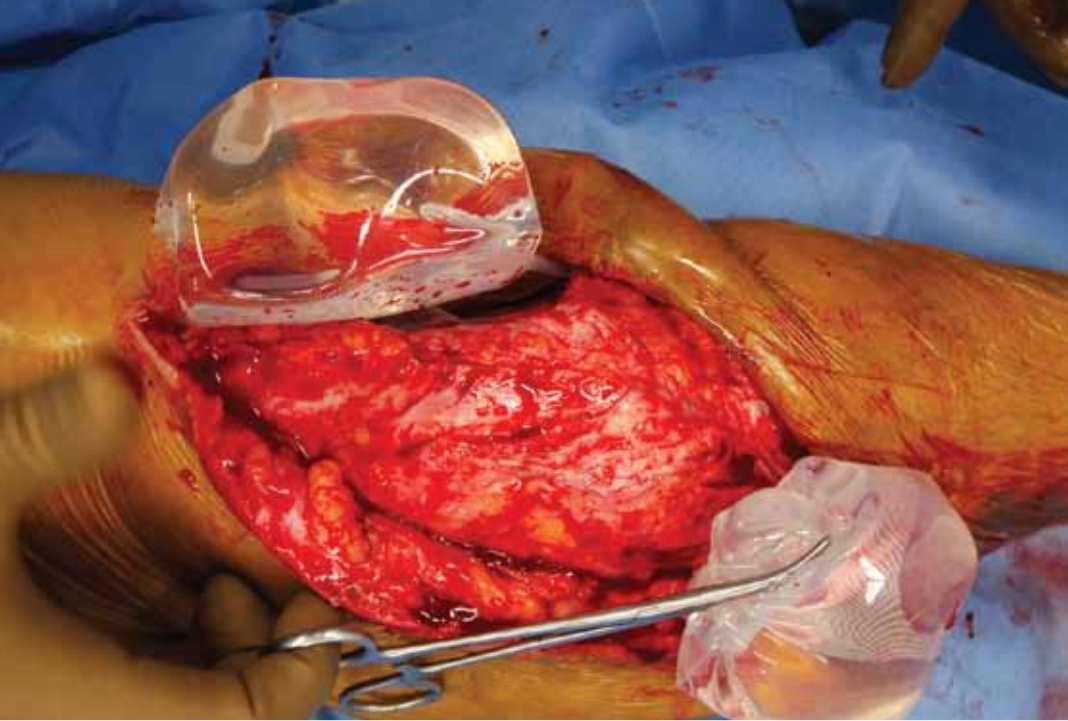
Revision Total Knee Arthroplasty

Gender Distribution



Age Category

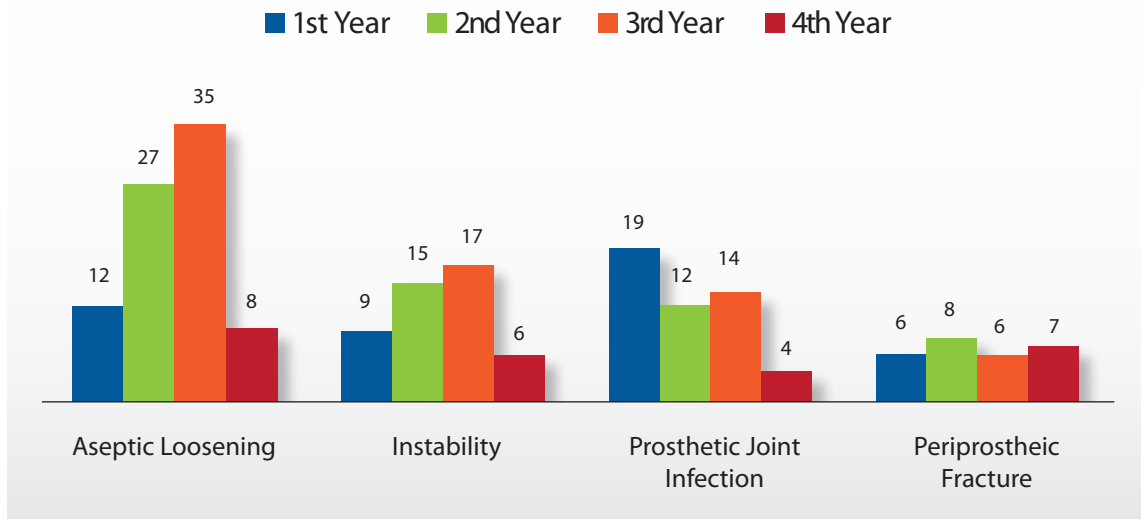




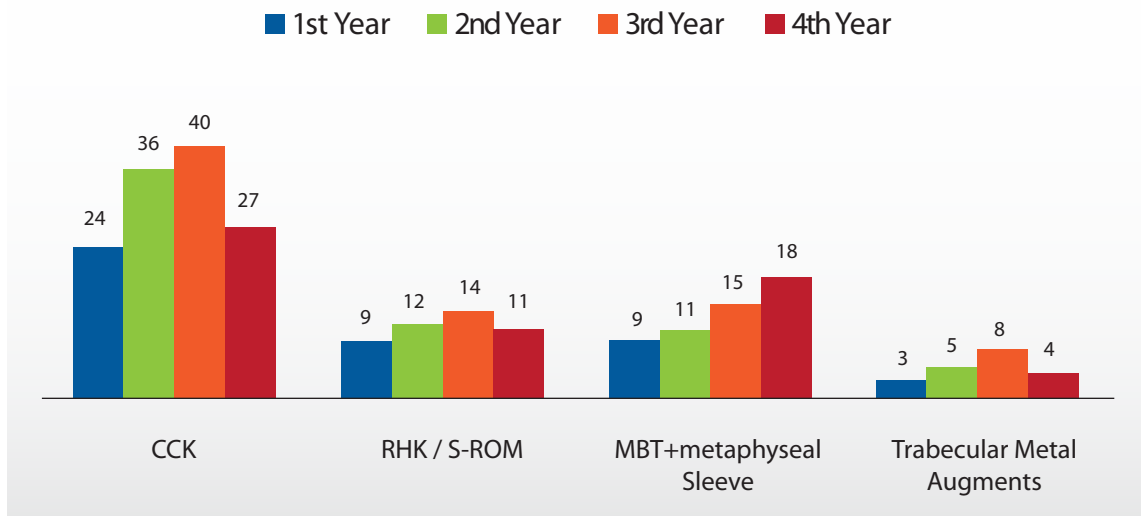
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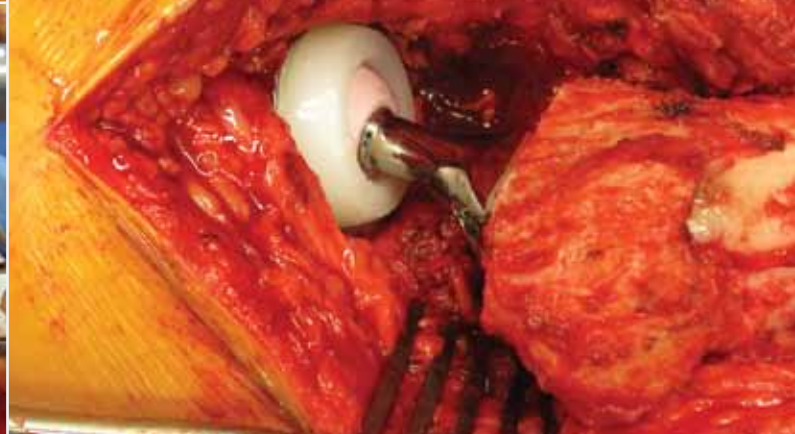
Revision Total Knee Arthroplasty

Diagnosis



Implant Detail





Primary Total Hip Arthroplasty

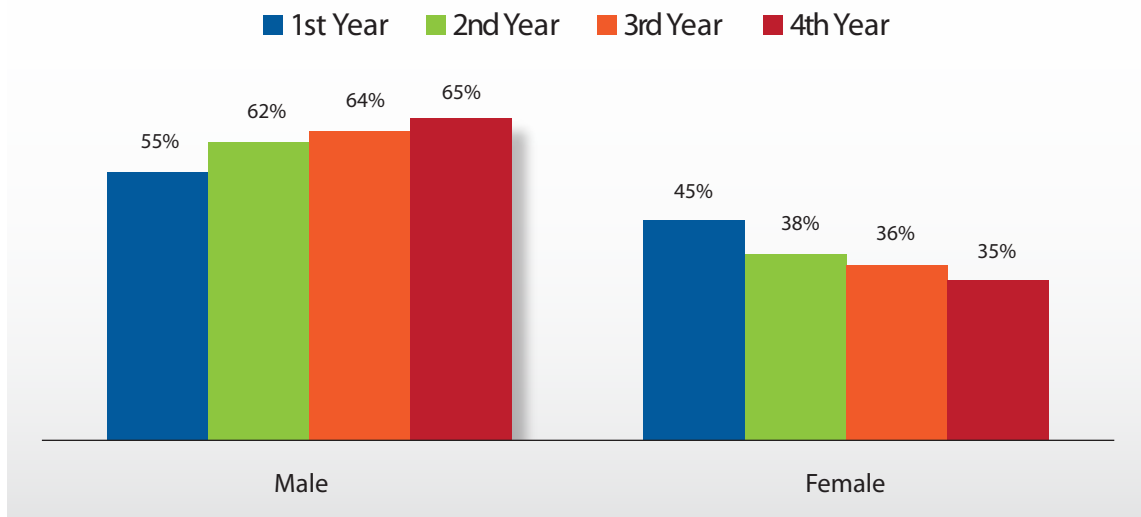
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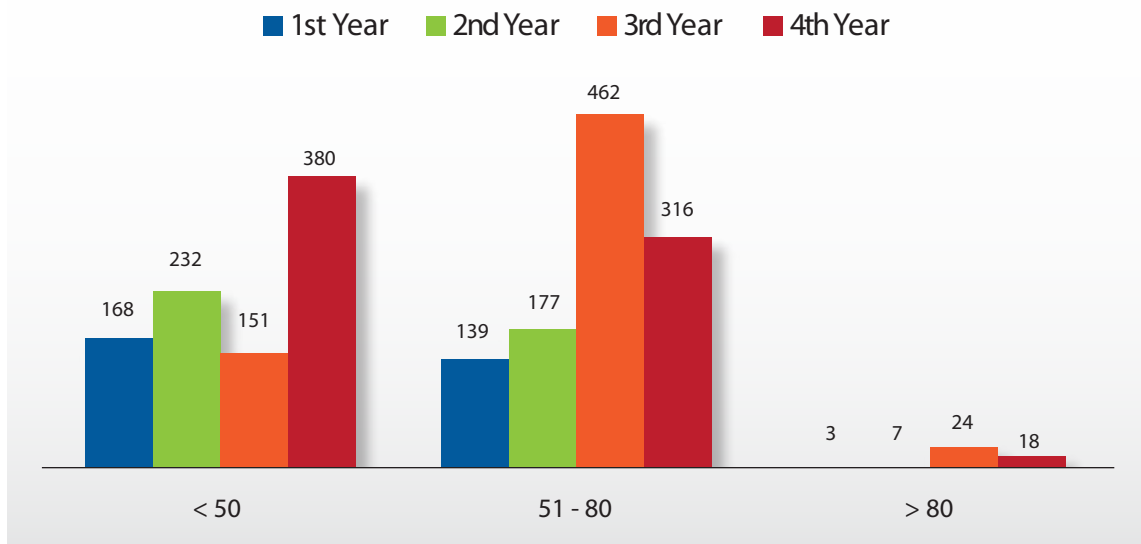
SECTION III

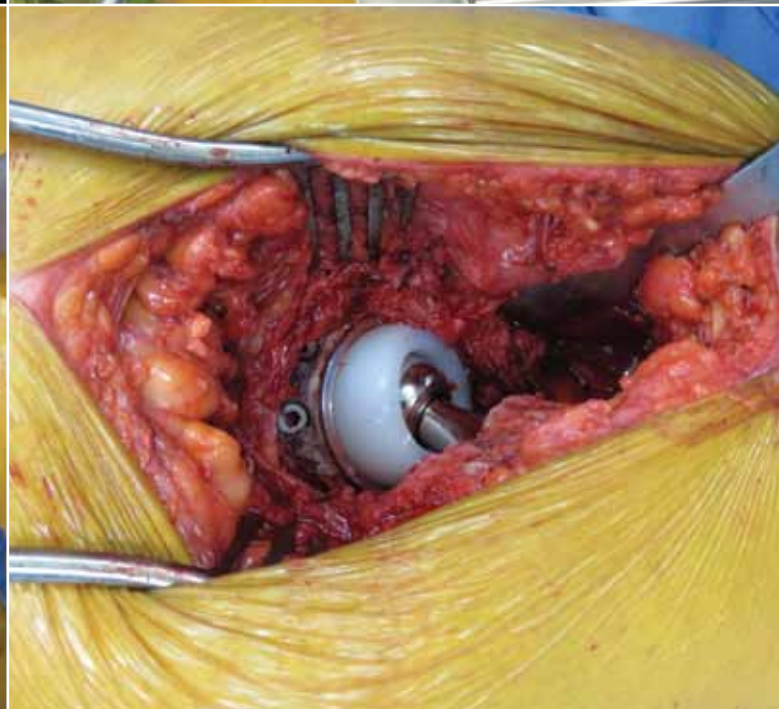
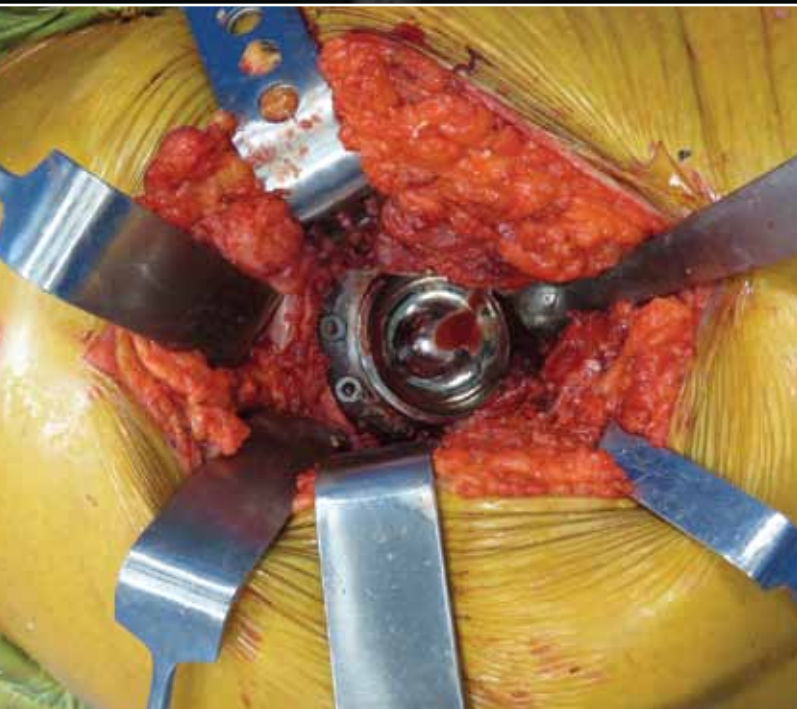
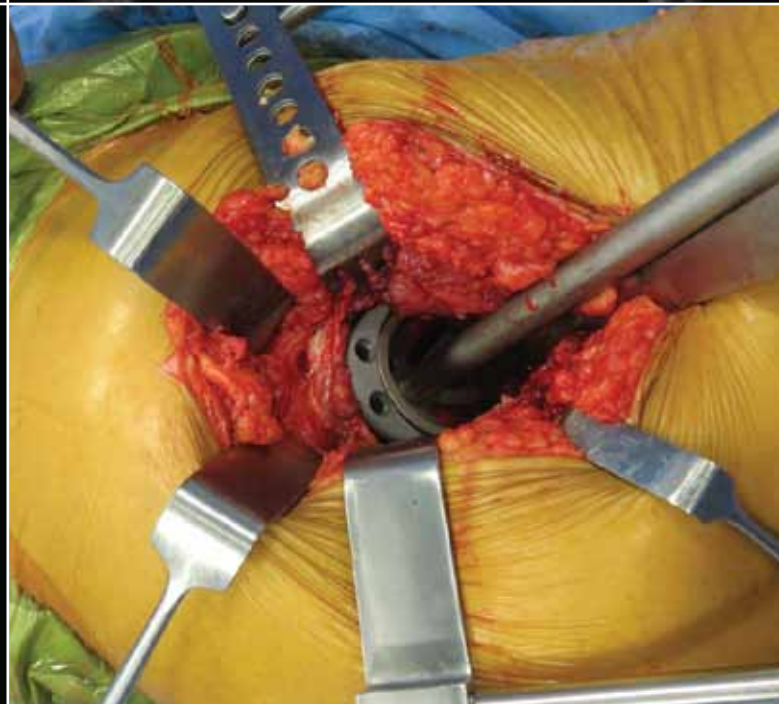
Primary Total Hip Arthroplasty

Gender Distribution



Age Category

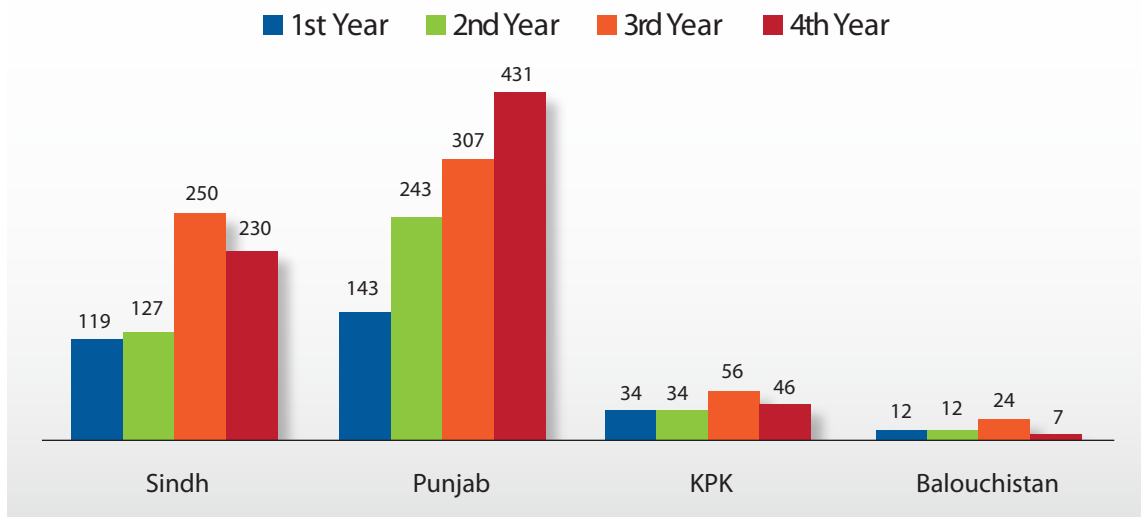




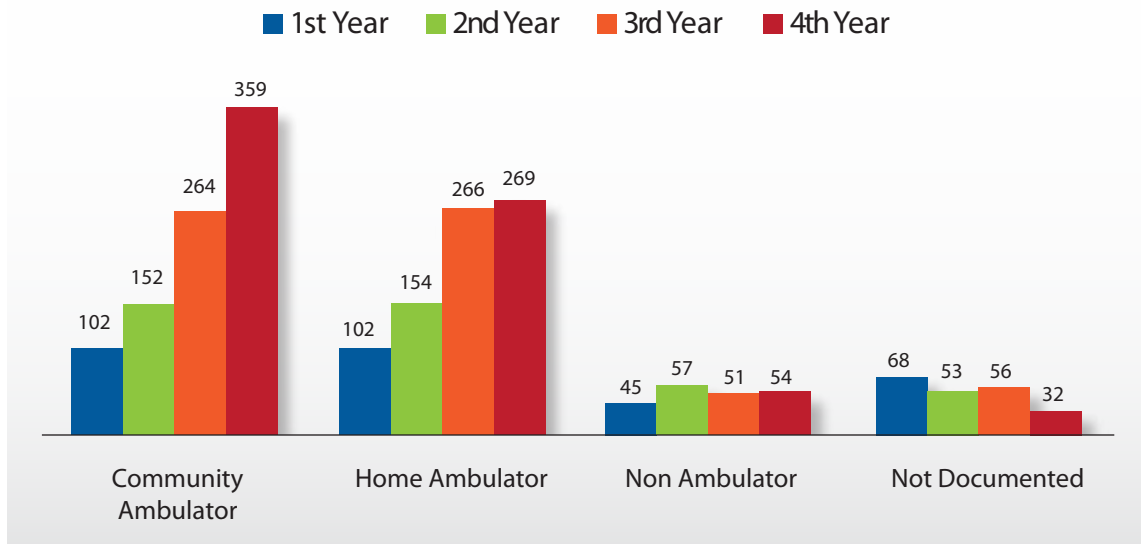
SECTION III

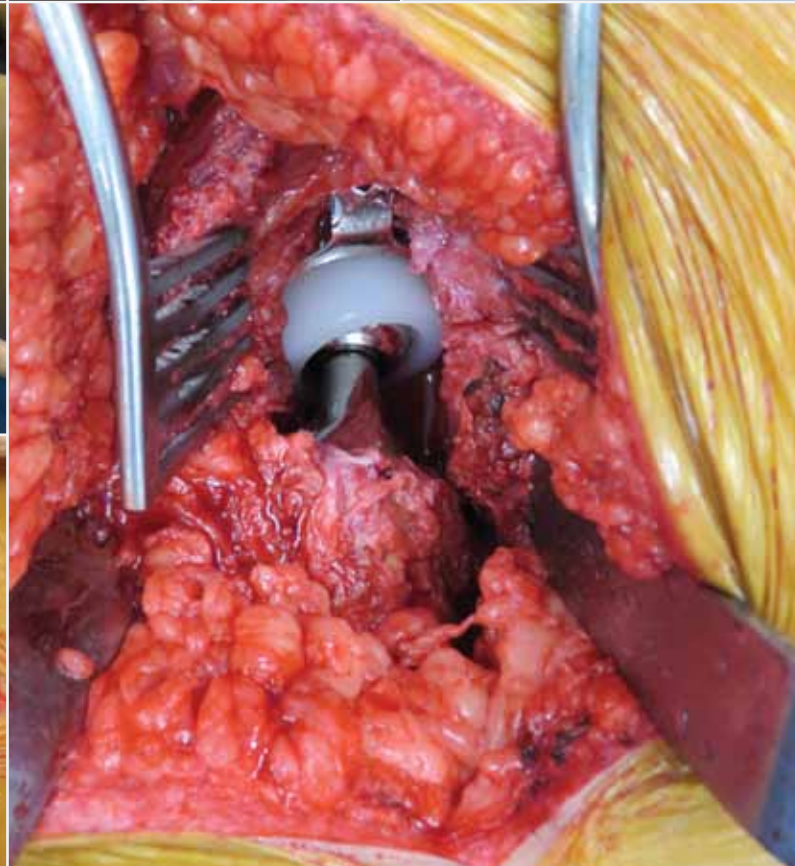
Primary Total Hip Arthroplasty

Geographical Distribution



Pre Operative Ambulatory Status



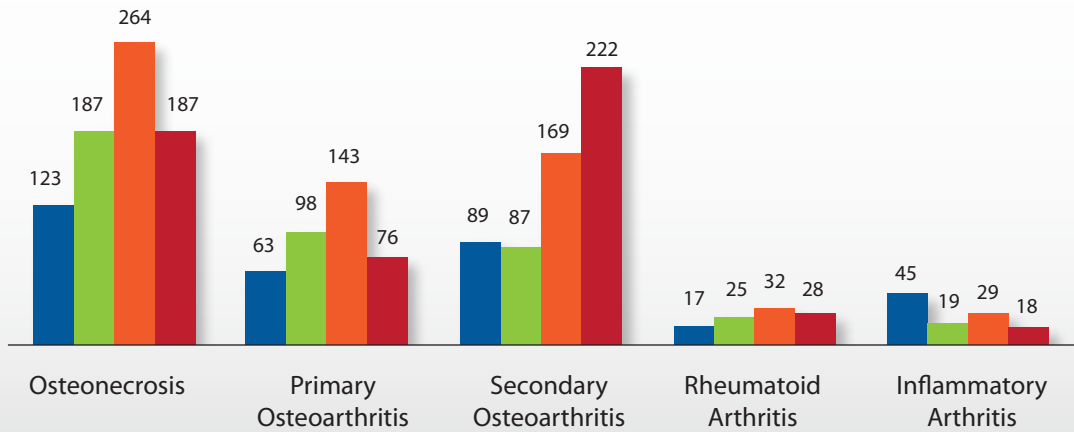


SECTION III

Primary Total Hip Arthroplasty

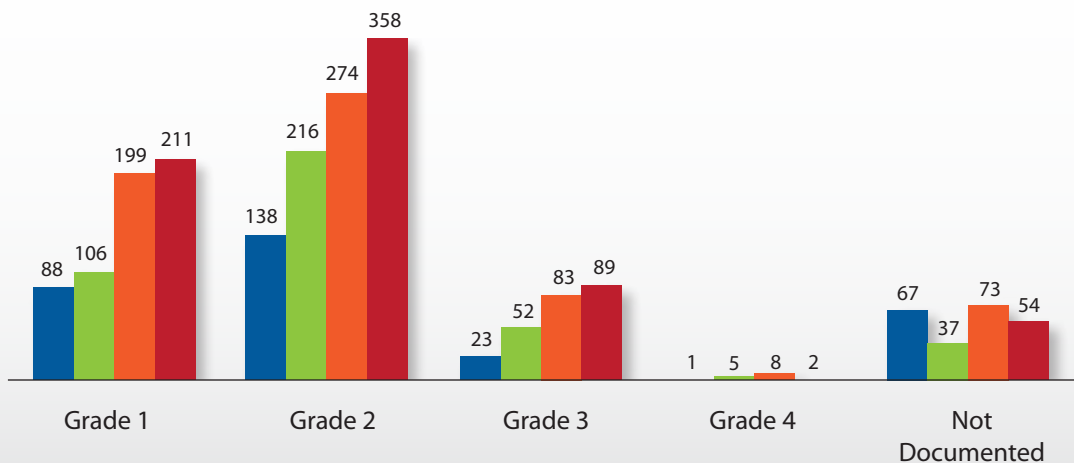
Diagnosis

■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year



ASA Grading

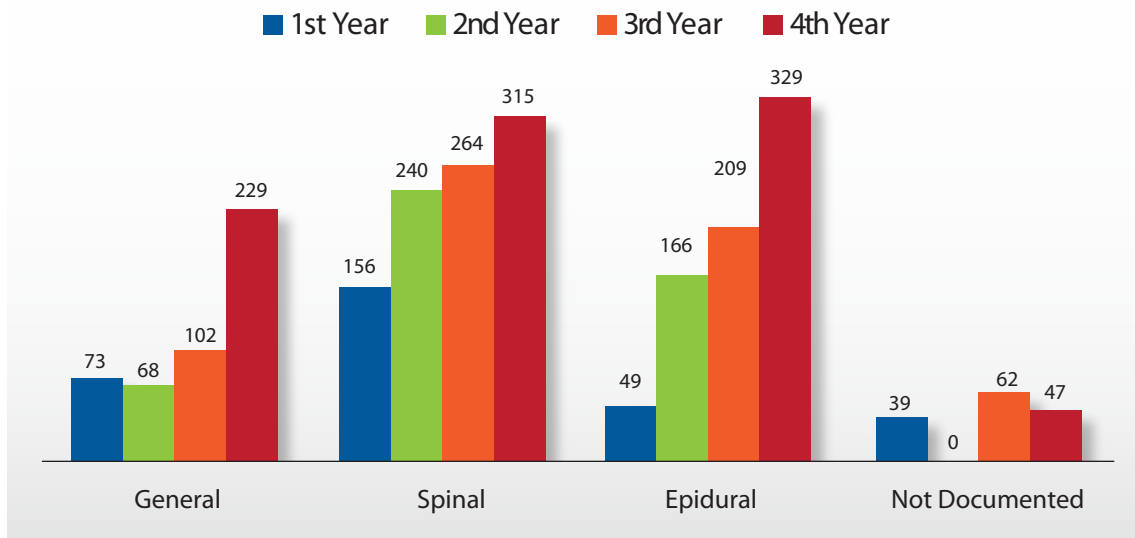
■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year



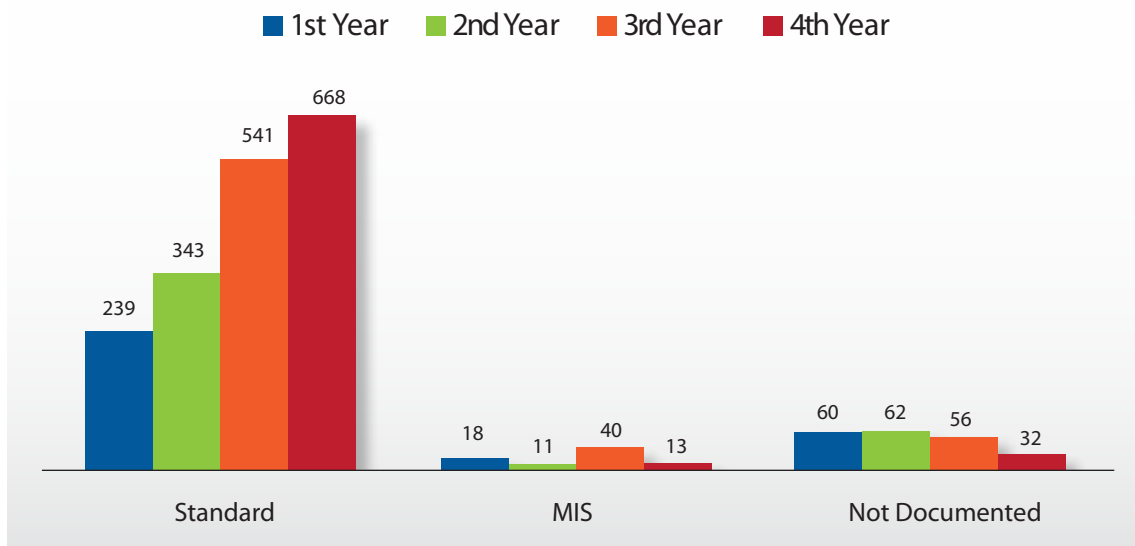
SECTION III

Primary Total Hip Arthroplasty

Types of Anesthesia



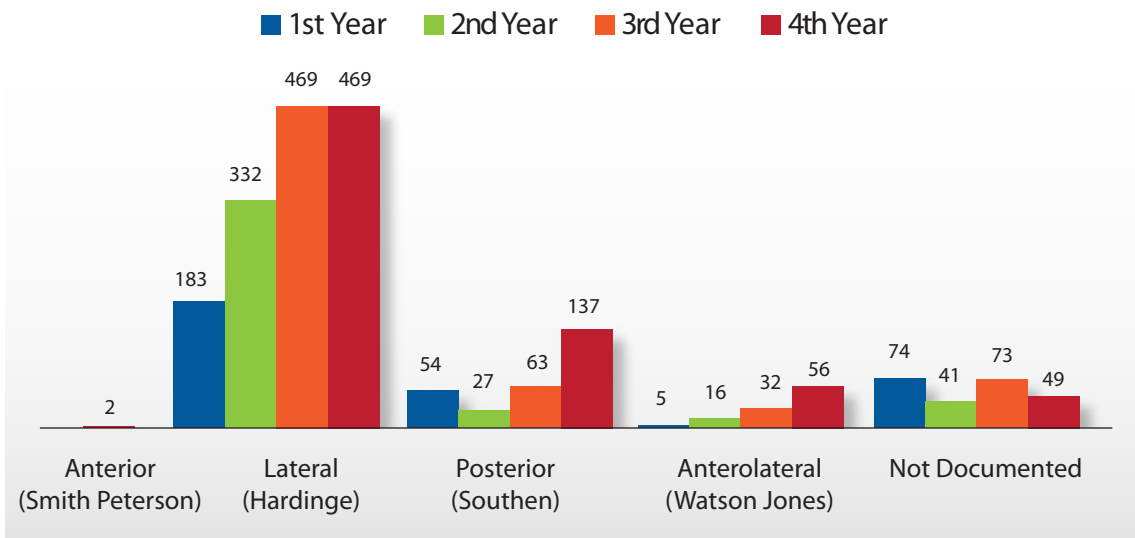
Surgical Incisions



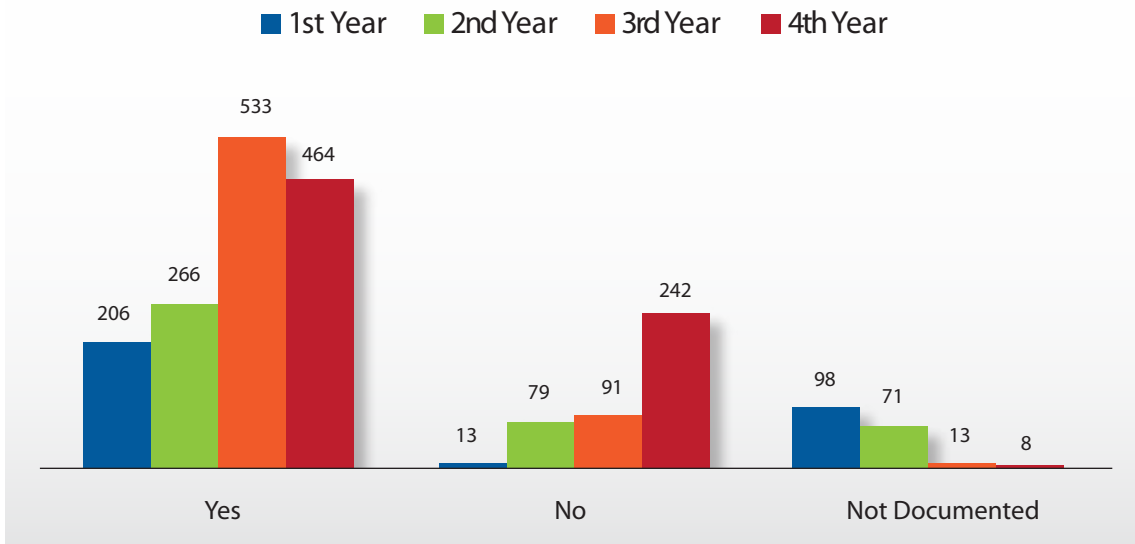
SECTION III

Primary Total Hip Arthroplasty

Surgical Approaches

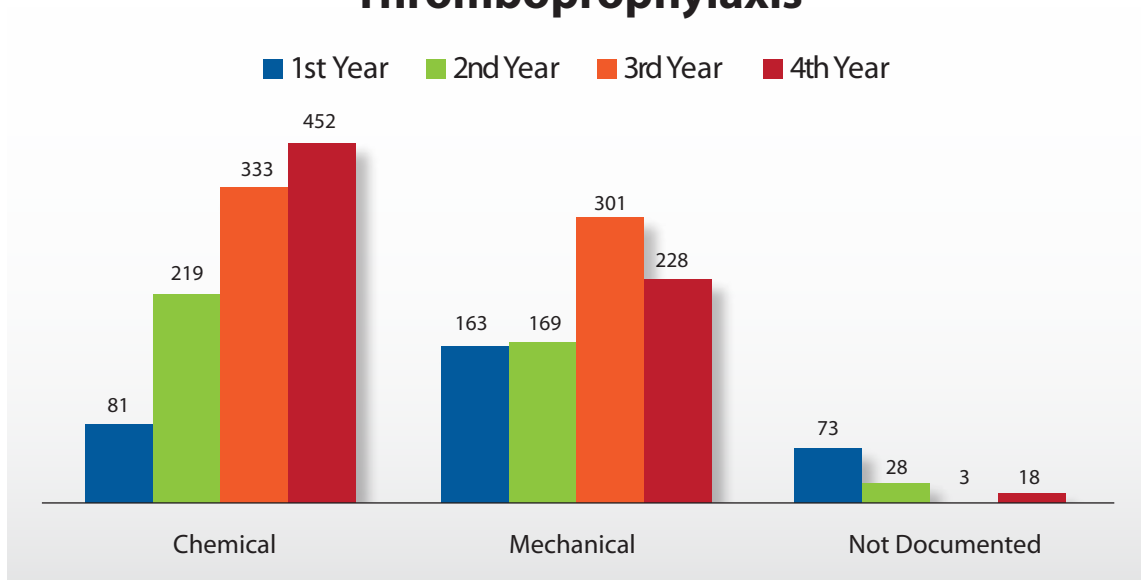


Drain Used

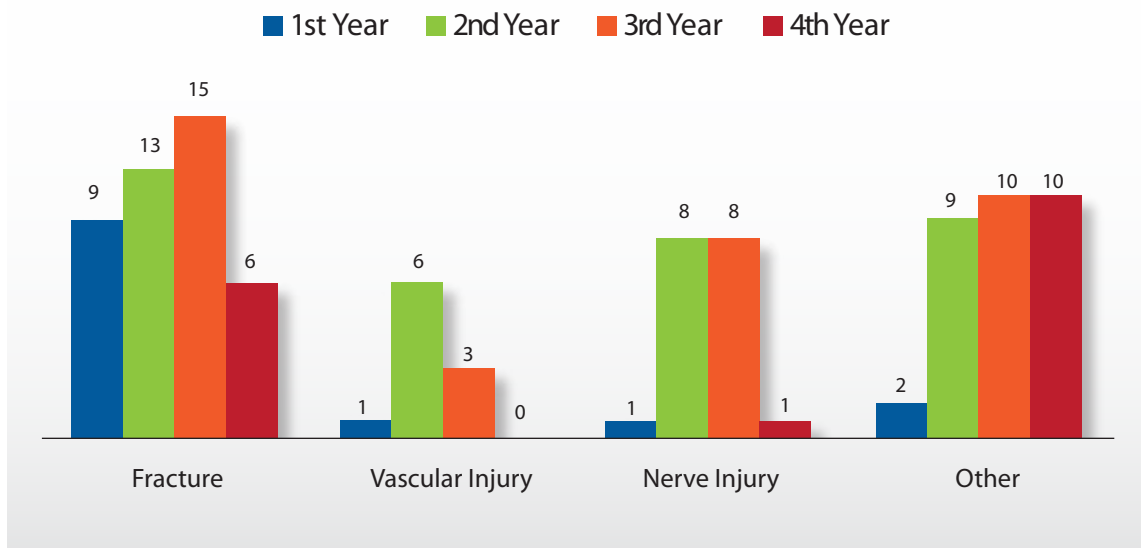


Primary Total Hip Arthroplasty

Thromboprophylaxis



Adverse Intraoperative Events

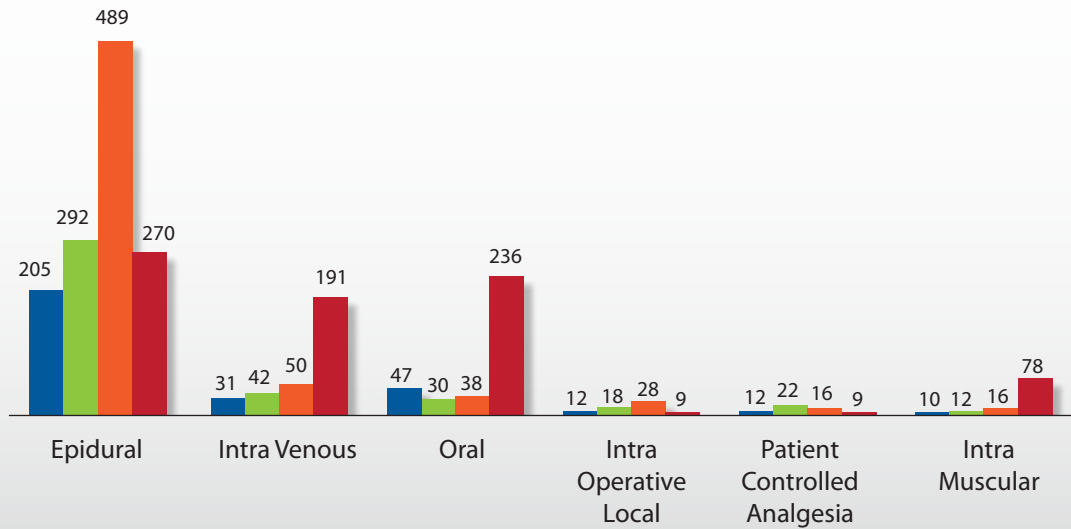


SECTION III

Primary Total Hip Arthroplasty

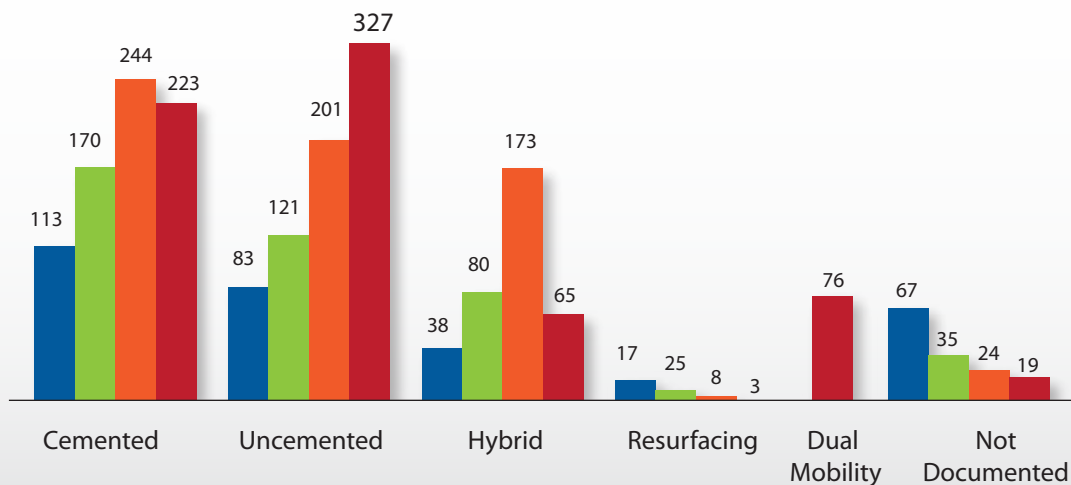
Post operative Analgesia

■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year



Implant Details

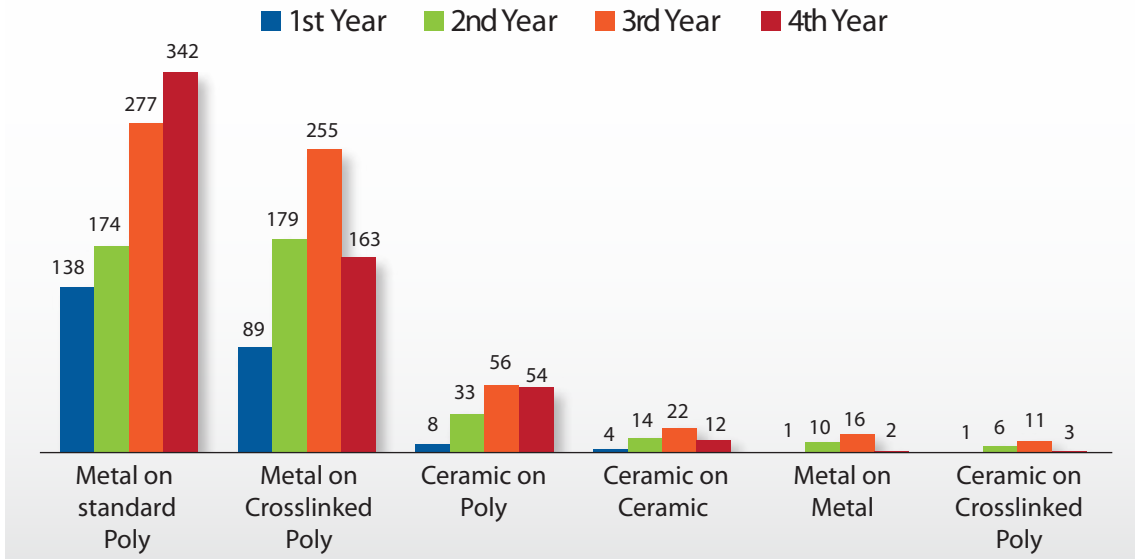
■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year



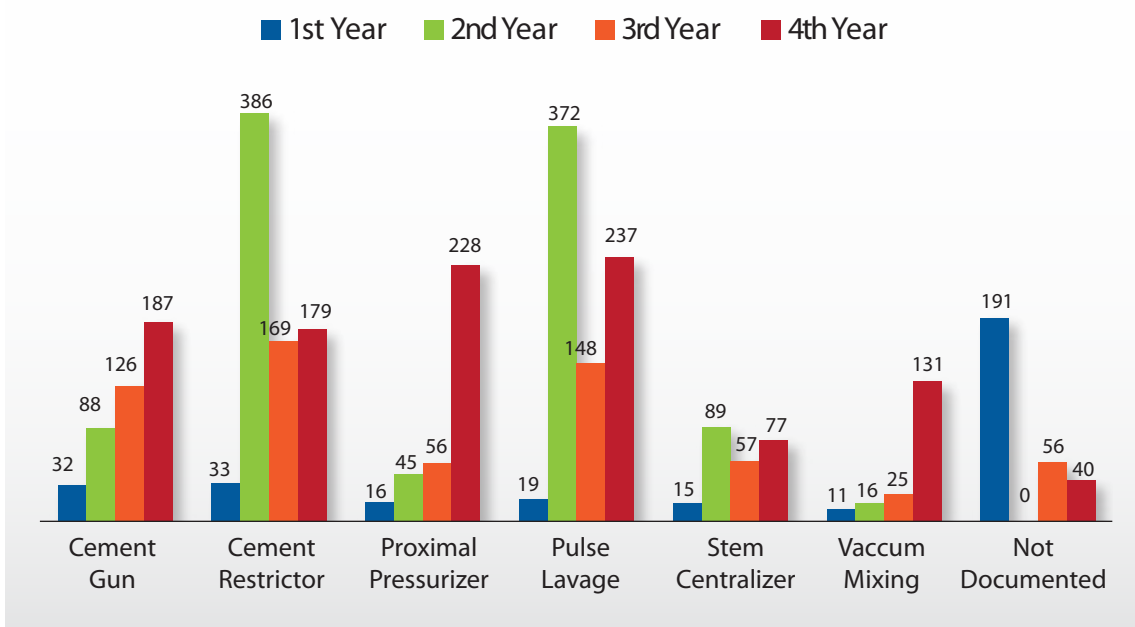
SECTION III

Primary Total Hip Arthroplasty

Bearing Surfaces



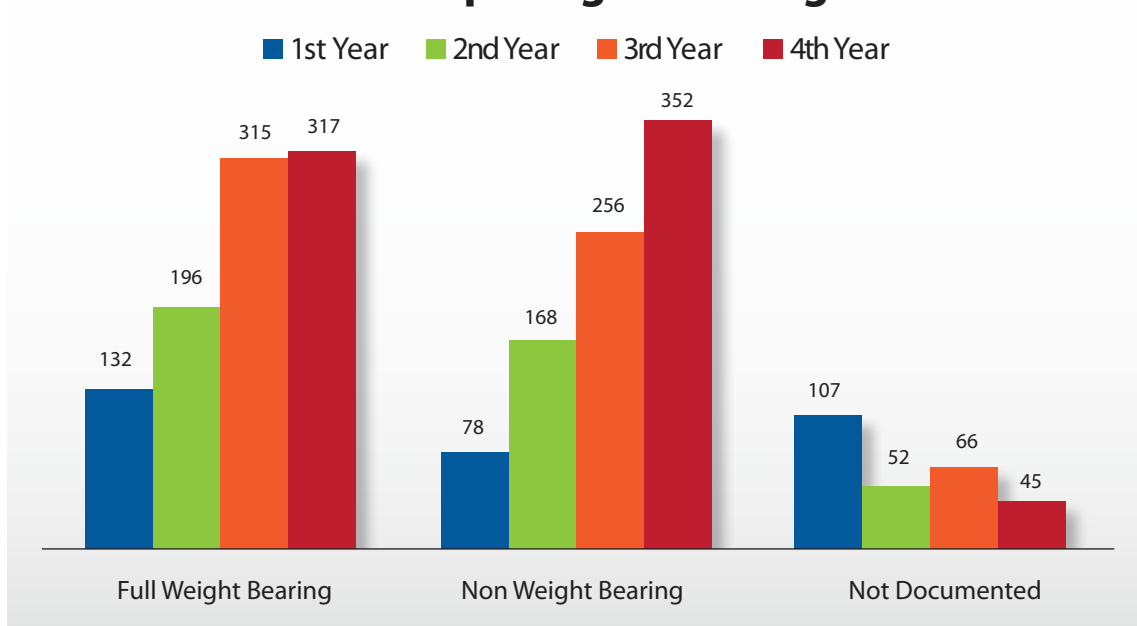
Cementing Technique



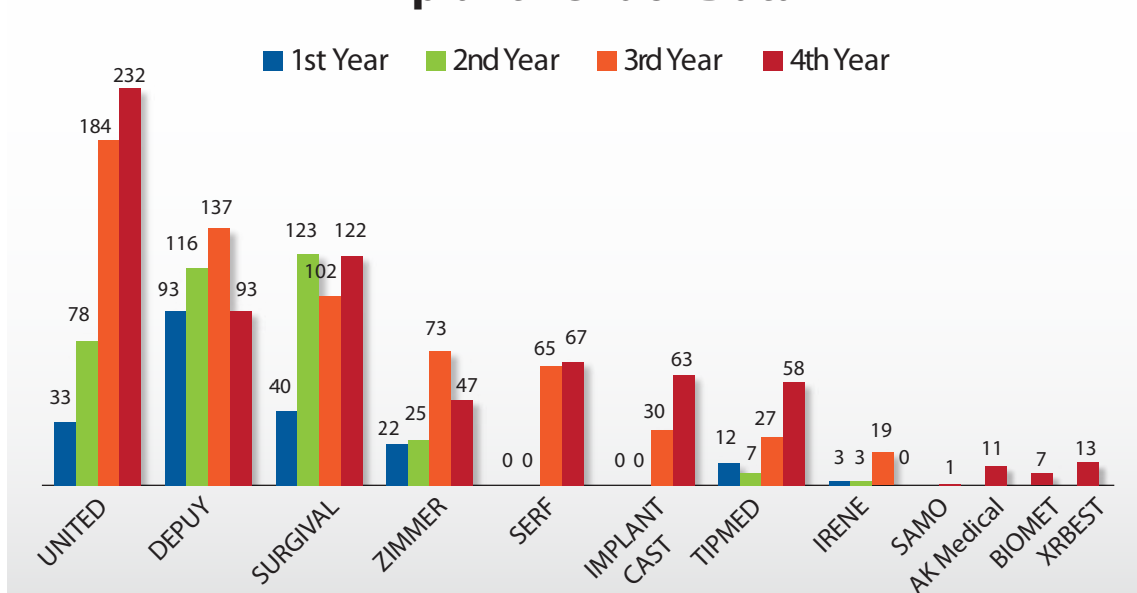
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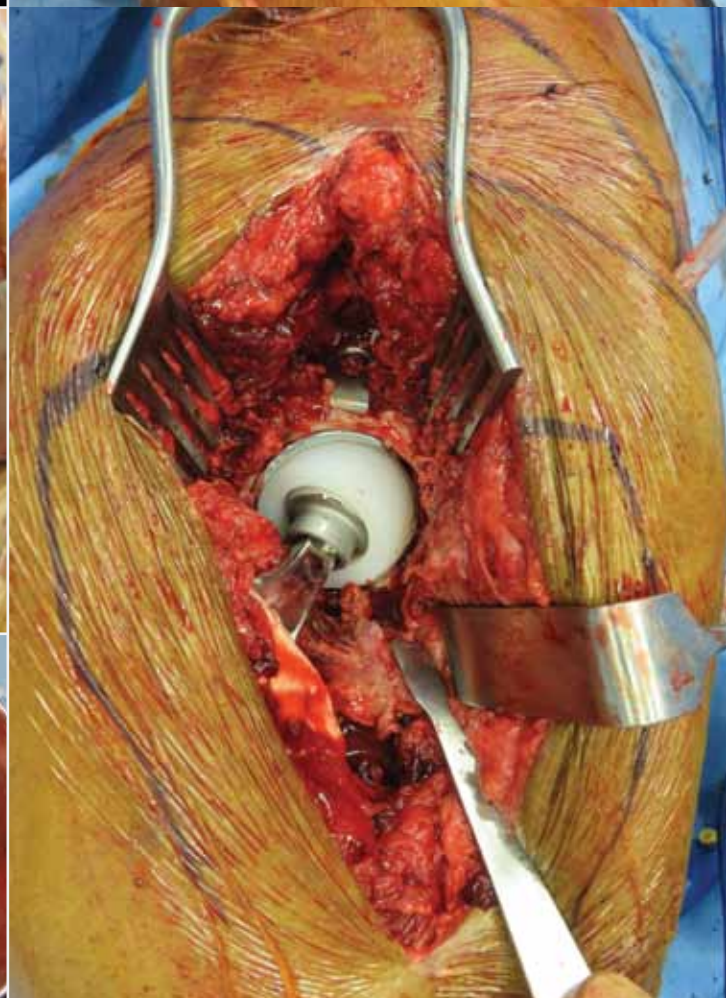
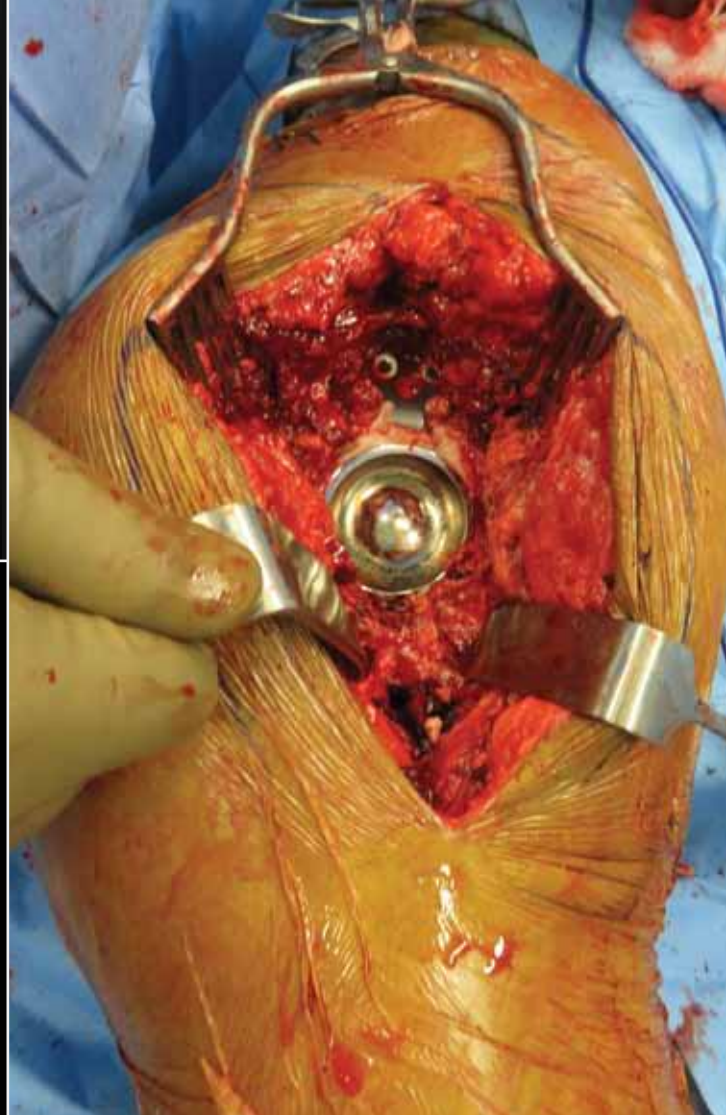
Primary Total Hip Arthroplasty

Post Op Weight Bearing



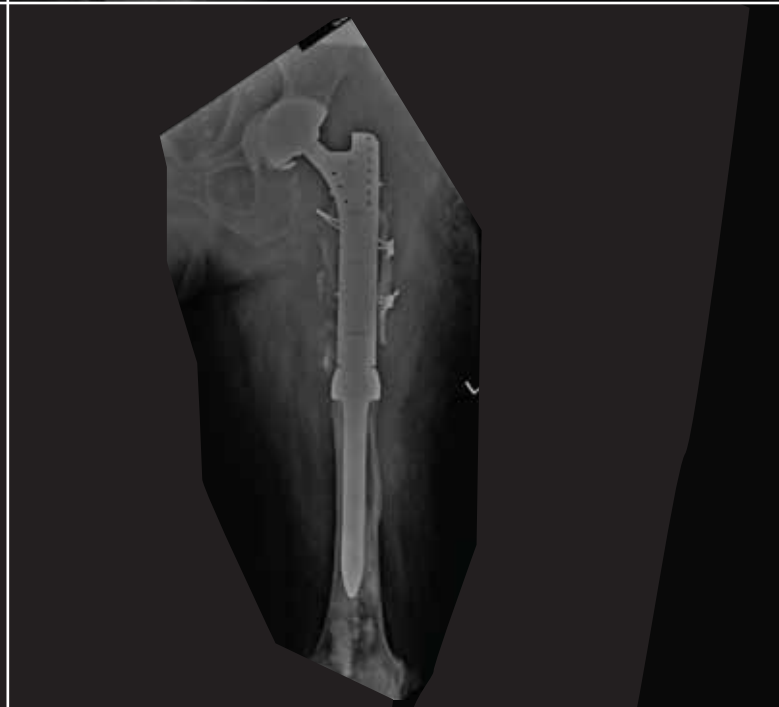
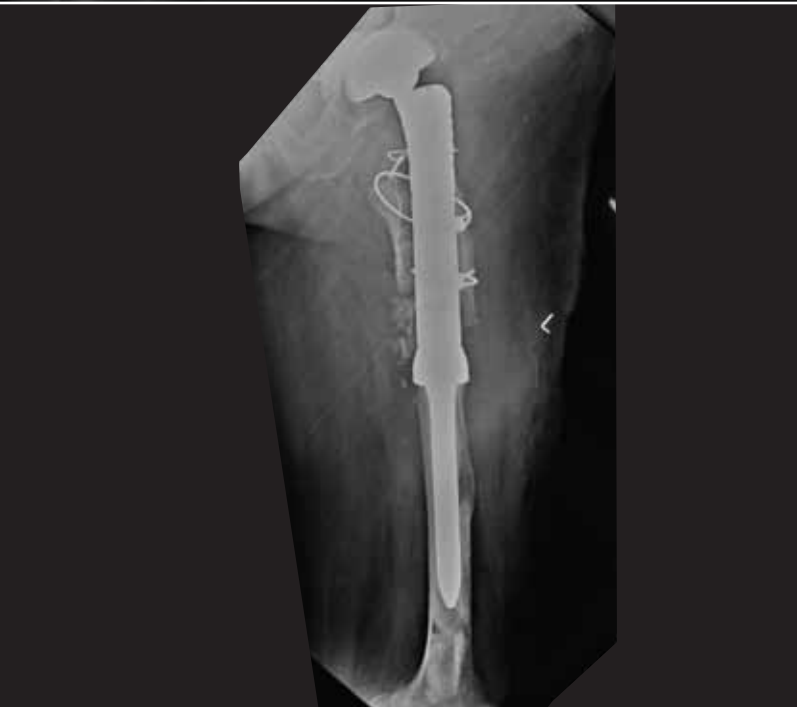
Implant Vendor Data





Revision Total Hip Arthroplasty

SECTION IV

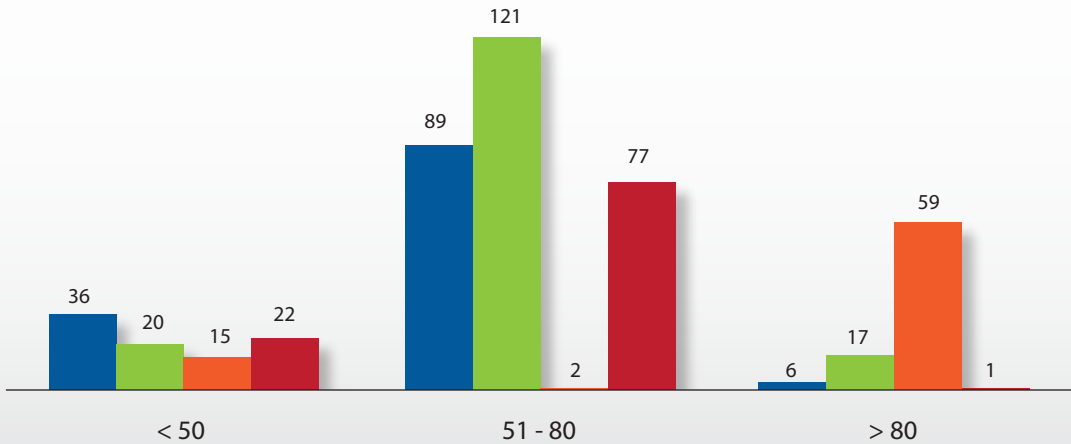


SECTION IV

Revision Total Hip Arthroplasty

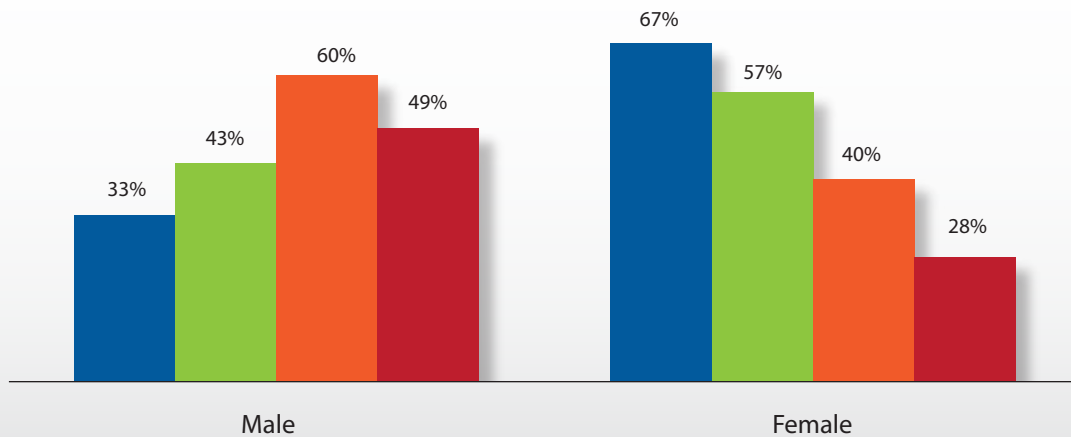
Age Category

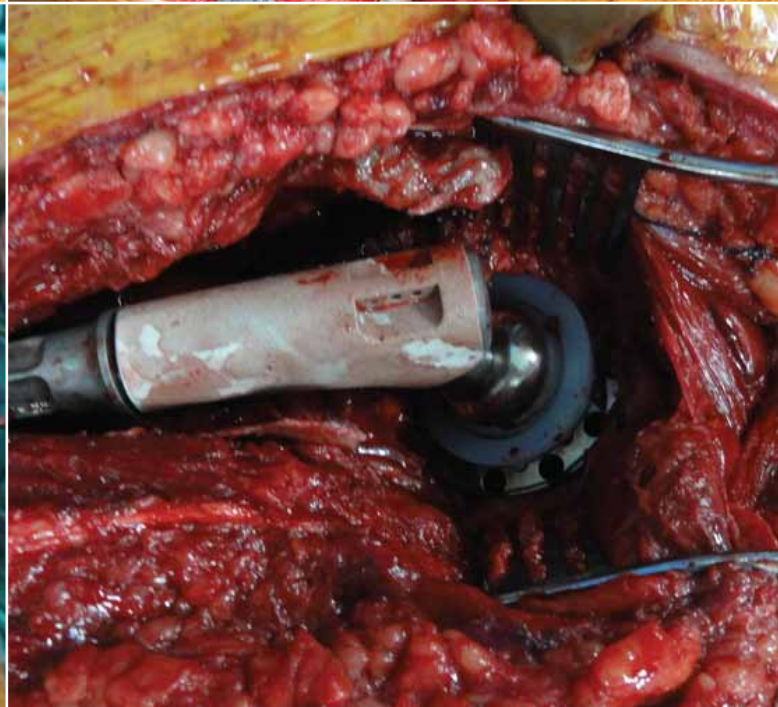
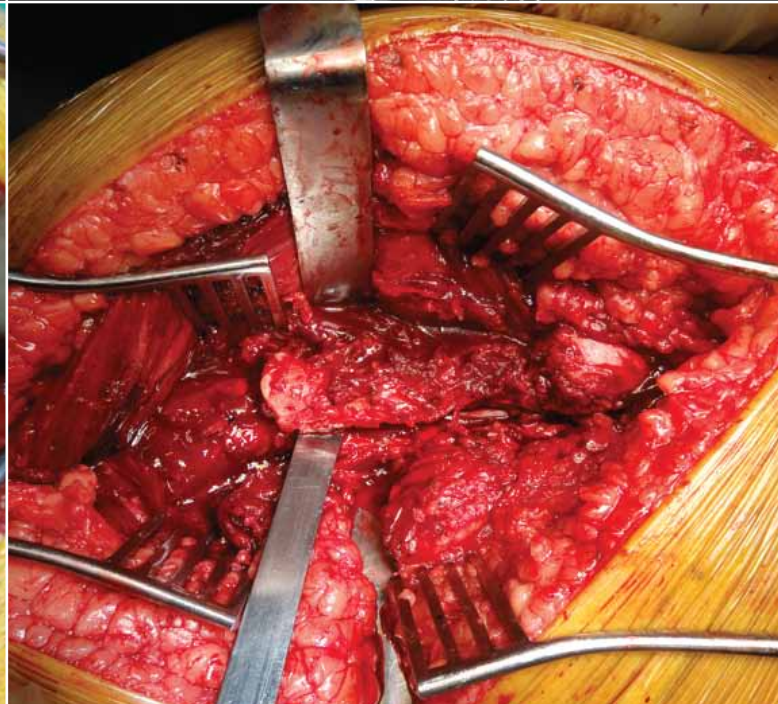
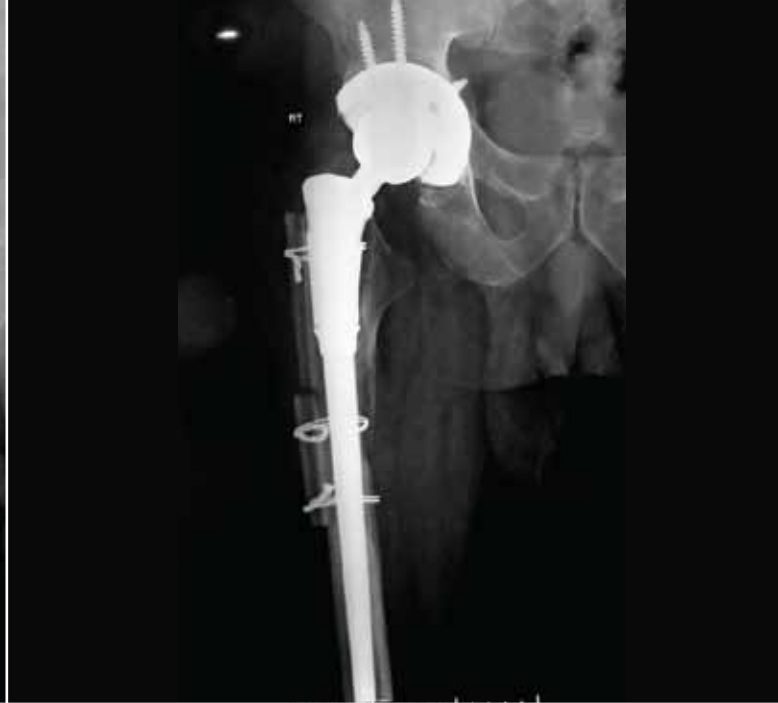
■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year



Gender Distribution

■ 1st Year ■ 2nd Year ■ 3rd Year ■ 4th Year

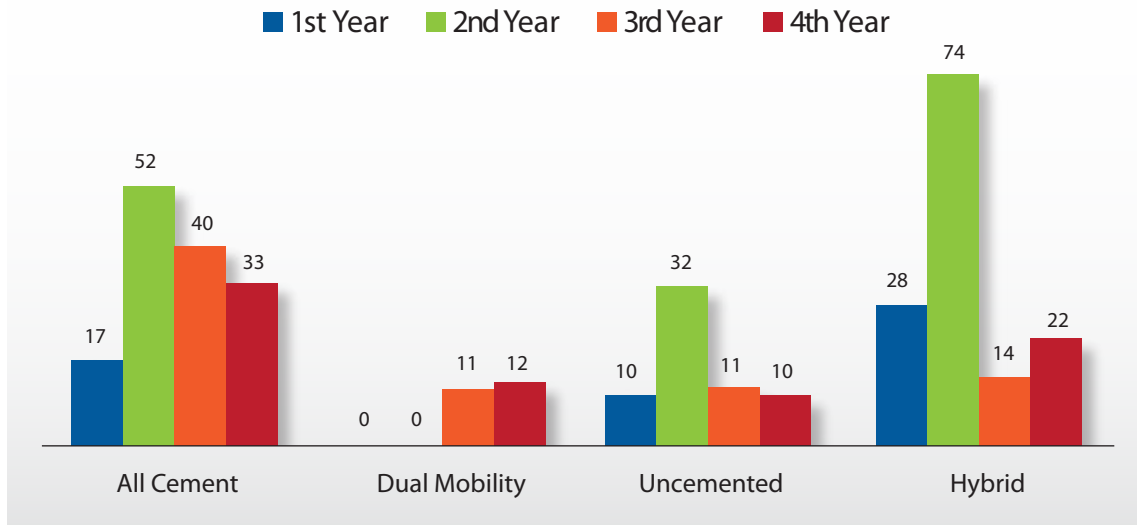




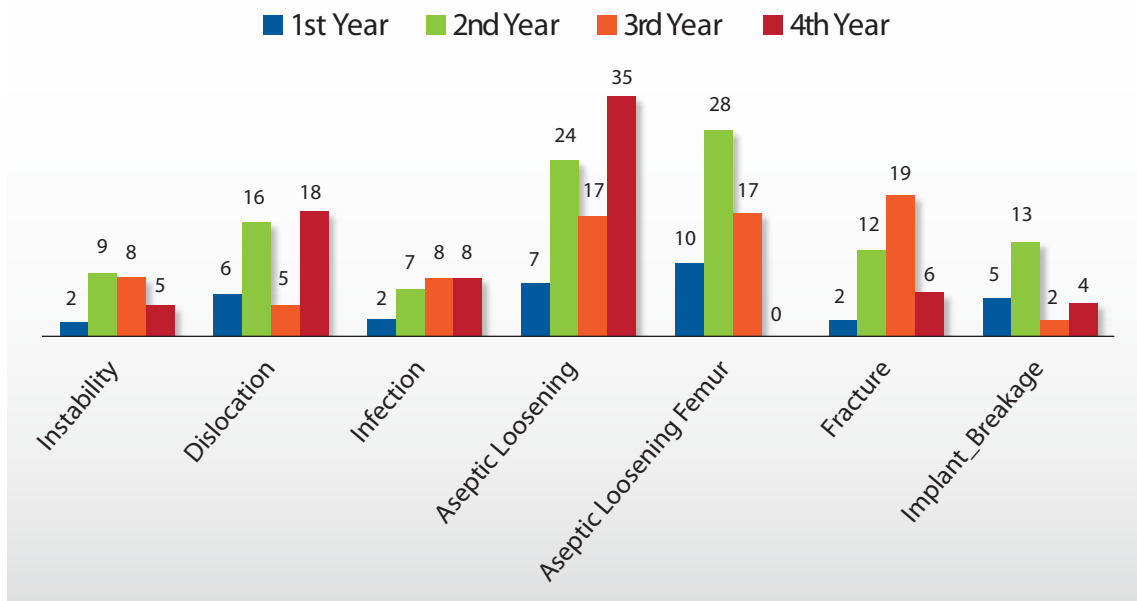
SECTION IV

Revision Total Hip Arthroplasty

Implant Details



Diagnosis



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