

Implant details

Reason for revision as listed by the surgeon: Malalignment of prosthesis and pain, no loosening

Explanted prosthesis: Stryker Triathlon CR TKR

Implantation side: Right

Implantation date: Unknown

Explantation date: 19/04/2023

Implantation duration: Unknown

PATIENT DATA ANONYMISED

Femoral component (CoCr alloy)

The femoral cement mantle was stable. There were no clinically relevant abnormalities on the bearing surface. Retrieval damage was identified on the bearing surface and on the medial and lateral aspects.



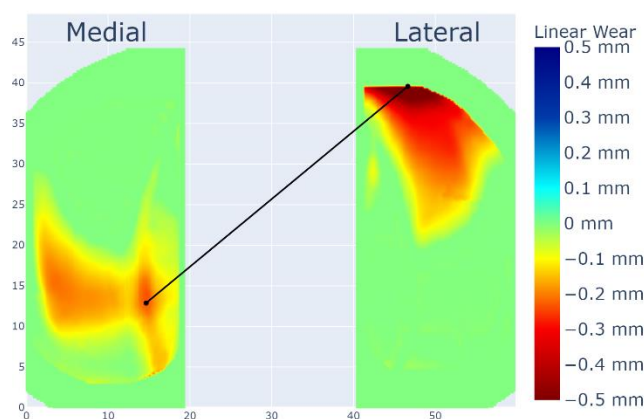
Tibial insert

Bearing surface

There was widespread damage, including striations, pitting, burnishing and scratching, on the medial and lateral condyles. Retrieval damage was identified on both condyles.



Coordinate Measuring Machine (CMM) analysis



	Medial	Lateral	Total
Volumetric Wear (mm³)	32.71	41.32	74.03

The angle between the centre of the medial and lateral wear scars was 40° (40° internal rotation).

The volumetric wear rate for the polyethylene insert was not calculated as the implantation date was unknown. The median volumetric wear rate of the polyethylene inserts of contemporary TKRs received at this retrieval laboratory is 9 mm³/year.

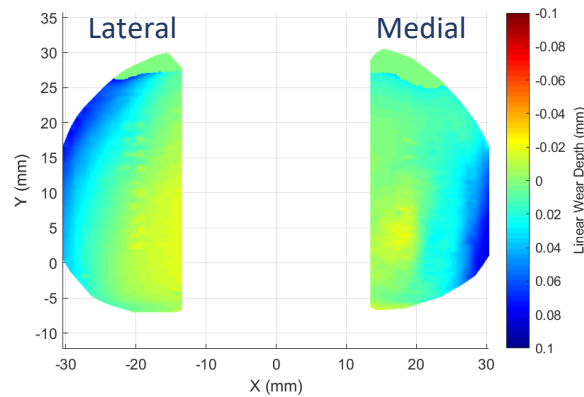
Tibial insert

Backside surface

There was widespread pitting predominantly on the posteromedial and anterolateral aspects. Retrieval damage was identified on the anterior aspect.



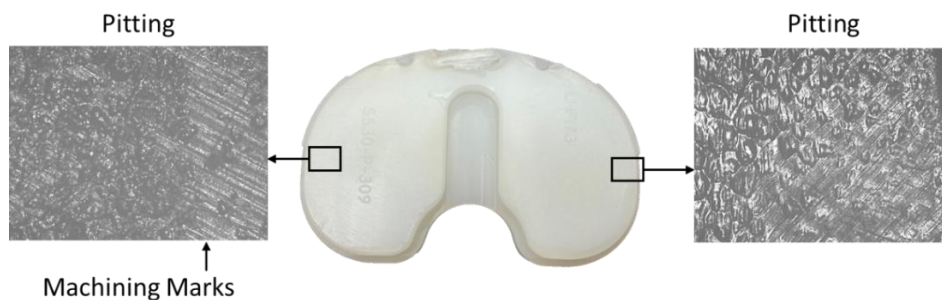
Coordinate Measuring Machine (CMM) analysis



	Lateral	Medial
Planar Deviation (μm)	90	100

Microscopic Analysis

Microscopic analysis confirmed the presence of pitting.



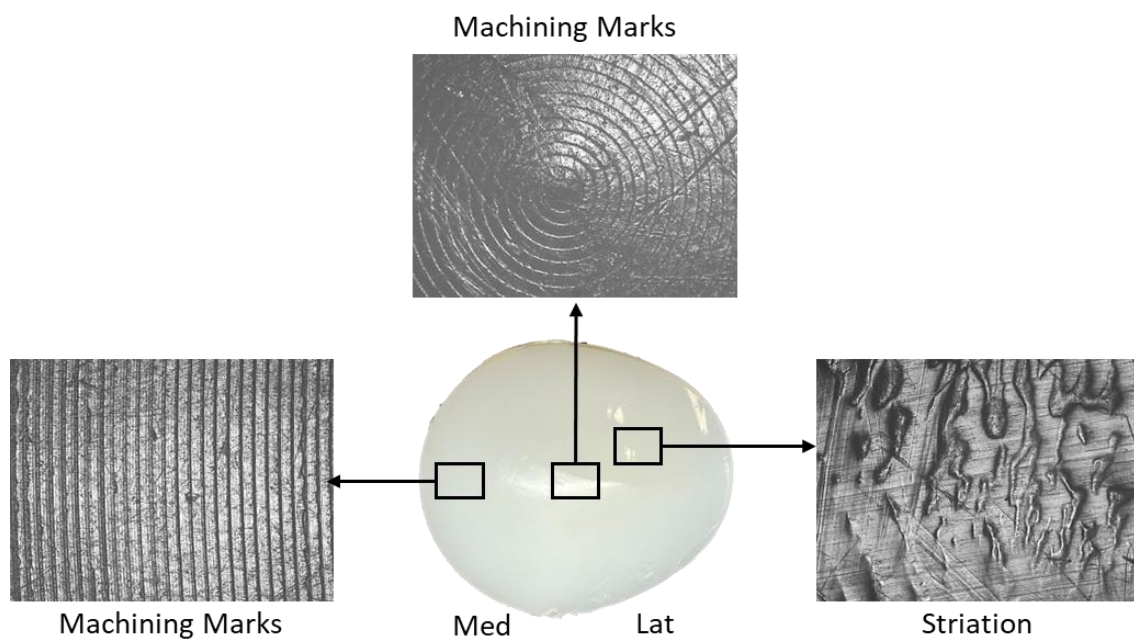
Patella

There were striations, burnishing and scratching. Retrieval damage was identified on the superior, inferior, and anterior surfaces.



Microscopic Analysis

Microscopic analysis showed the presence of striations and abrasive changes.



Tibial tray (CoCr alloy)

There was minimal retained bone/cement on the inferior surface. There were no clinically relevant abnormalities identified on microscopic inspection of the superior surface. Retrieval damage was identified on the superior and inferior surfaces.



Summary

Atypical distribution of material loss on the polyethylene bearing surface, with maximum wear identified at the anterior aspect of the lateral condyle.

The volumetric wear rate for the polyethylene insert was not calculated as the implantation date was unknown. The median volumetric wear rate of the polyethylene inserts of contemporary TKRs received at this retrieval laboratory is 9 mm³/year.