The ClearPoint® System Initial Site Analysis:

# Appendix 1:

# Clear Point OR Resources





# MRI Checklists for All Personnel

MF	MRI Checklist:					
	Confirm patient does not have a VNS implant					
	ClearPoint staff confirms network connection and retrieves preplanning imaging using patient's most recent MRI study with contrast if available					
	QA scans done morning of using pre-approved flex coil (and IMRIS extension if IMRIS)					
	Confirm terminal is clean & room is swept and clean: If in diagnostic scanner, let cleaning team know ahead of time – terminal clean will need to be done early in the morning of, or evening prior to surgery					
	Ports/coils connections covered on scanner table to protect from fluid					
	Patient MRI metal checklist done					
	ClearPoint staff present, system checked (network connection), scanner working, and intercom working					
	Headframe, coils, and ClearPoint stick for draping present (if applicable)					
	ClearPoint protocol pulled up and ready for first scan with patient registered on MRI scanner with proper patient orientation					
	If required, contrast ready to be used for first volumetric Tl scan (with 3D correction ON)					
	Patient ear plugs in and cuff tapped					
	Patient pinned using MRI compatible pins					
	ETT and lines tucked; taped and confirmed at isocenter before patient moved to back edge of bore					



An	Anesthesia Checklist:						
	Anesthesia monitors working, cart stocked, and gases & ventilator working						
	Patient asleep and intubated; two sets of extension tubing needed as patient will be at the back of the bore for majority of case						
	A-Line placed (if requested by surgeon and anesthesia; advised for LITT cases)						
	Batteries for monitors fully charged with backups charged and ready (further discuss with MR team)						
	Make sure all personal metal is removed from body and remains outside room for duration of procedure						
	Inflator cuff should be taped to the endotracheal tube						
	If positioning prone, discuss use of bite guard and eye protection						
	Effort is made to have minimal contact between monitoring wires and the skin; wires should run in a straight line without loops towards the patient's feet and as close as possible to the center of the bore to prevent burns						
	Line used for injection of contrast is easily accessible						
	As MRI checklists are complete, the patient will be moved into the MRI suite; the anesthetic circuit is disconnected for the move and then reconnected to MRI compatible machines – Circuits must be long enough						
	Discuss with surgeon when antibiotics should be administered						
	ETT and lines tucked and taped						

Sui	urgery Checklist:						
	Case cart present and stocked with instruments present and sterile: Stryker drill (DBS), suction with tubing (DBS), Lidocaine, bipolar and cord (DBS)						
Confirm present: Mayo stand, garbage can, mobile light, stepstool							
	Prep area setup outside of MRI for pinning, include pins and tool for shaving if applicable						
	ClearPoint and lead/laser supplies present and in code						
IMRIS: Power screwdriver and proper bit present							
	<ul> <li>IMRIS LASER: Power drill ready/available</li> <li>IMRIS DBS: Stryker drill or perforator ready/available (pending surgeon preference)</li> <li>DIAGNOSTIC DBS: Stryker drill sterile/present, nitrogen tank present/full, drill tested/working, suction tubing, bipolar and extension cord</li> </ul>						
	Compression stockings, socks, SCDs on						
	Foley (metal clip removed)						
	Patient transferred to MRI table						
	MRI-compatible temperature probe placed						



# DBS Workflow & Product Knowledge

# **ClearPoint Product:**

Marking Grid	Prep, drape, and apply marking grid(s)
Bass Mount (Scalp/Skull) SmartFrame Hand Controllers (if applicable)	SCAN: Volumetric scan (~5 to 8 minutes) Post scan Post scan TIME TO SET UP: Drill, suction, bipolar Surgeon to begin initial planning
*Open lead securing device*	Awl marks; remove grids for incision  Complete 14mm burr, Pac-man tested, and fits properly in Stimloc (dura open or close)
	Mount base(s) and frame(s) and align by hand to get close; attach hand controller if applicable
	IMRIS SETUP: Power screwdriver and proper bit present
Accessory Kit *Lead(s)*	SCAN: T1 frame scan (~5 to 8 minutes) followed by targeting scans (~7 to 10 minutes); Confirm trajectory
	Alignment scans and adjustments complete (Series of short scans: ~4 minutes between each adjustment)
	Measure and mark ceramic stylet (complete while running set of scans can save time)
	Insert ceramic stylet and scan to confirm placement
	SCAN: T1 Volumetric Evaluation Scan (5 to 8 minutes) – Measure and insert lead through peel-away sheath MRI Verification of placement (if viable)
	Lock down lead, remove peel-away sheath, and secure lead with Pac-man and cap
	Remove frame and close Patient out



# Laser Catheter Placement Workflow & Product Knowledge

# **ClearPoint Product:**

Marking Grid	Prep, drape, and apply marking grid(s)	
Scalp Mount Base SmartFrame XG	SCAN: Volumetric scan (~5 to 8 minutes) - Surgeon to begin initial planning	
Hand Controllers (if applicable)	Mount base(s) and frame(s) and align by hand to get close; attach hand controller if applicable	
	IMRIS SETUP: Power screwdriver and proper bit present	
Twist Drill and Bits 3.4mm WHITE Guide Tube 4.5mm GREEN Guide Tube	SCAN: T1 frame scan (~5 to 8 minutes) followed by targeting scans (~7 to 10 minutes); Confirm trajectory TIME TO SET UP: Twist Drill with smallest 3.4mm bit	
	Alignment scans and adjustments complete (Series of short scans: ~4 minutes between each adjustment)	
	Timeout, Local, <u>incision</u> , and drilling with twist drill	
	IMRIS SETUP: Power drill setup/available	
Accessory Kit *Laser Catheter*	SCAN: Repeat last set of orthogonal sequences to confirm appropriate projected error post drilling; adjust if necessary	
	Measure and mark ceramic stylet (complete while running scans can save time)	
	Insert ceramic stylet and scan to confirm placement	
Appropriate Guide or	SCAN: T1 Volumetric Evaluation Scan (5 to 8 minutes)	
Reducing Tube	Measure and insert catheter through tower	
	MRI Verification of catheter placement	
	Begin Ablation	
	Remove frame	
	Patient out	



# Safety Time-Out Date:

Scrub Technician & Surgeon perform back table safety check and verify removal of the following:

	Magnet from needle mat (if using)				
	Grounding pad				
_	25 Gauge needle from local (if opened on field)				
	Twist tie from bipolar cord				
	Foil from bone way and suture packs				
	Instrument basket and stringer				

Scrub Technician will safely secure magnet / critical items to remain on sterile field:

Suture needles					
Safety scalpels					
MRI safety burr(s)					
Stay hooks					
+/- Biocement applicator					
Cranial plating system					
Other:					



# Safety Time-Out Date:

# All staff pat-down and pocket check for:

Pagers
Phones
ID(s)
Watches
Hair Clips

# All staff check around the patient for removal of:

Laryngoscope handle and blade
Angio catheter stylets and needles
Clipper (head and body)
Non-compatible monitoring electrodes and devices

# All staff check patient for:

All MRI cables, tubes, wires, and lines-minimal skin contact, straight, no loops					
ET tube cuff taped to the ET tube					
Earplugs					
MRI-compatible temperature probe					
No medication patches					
Metal clamp removed from Foley					
Foley drainage bag secured under mattress					

# All non-MRI safe equipment and supplies removed beyond 5 Gauss line.



# DBS Electrode Implantation with MRI Guidance Bilateral

# **General Information:**

Procedure Name: BURR HOLEFOR DBS ELECTRODE IMPLANTATION W/ MRI GUIDANCE BILATERAL Online

Display Name: (HEAD1137) Burr Hole For DBS Electrode Insertion with MRI Guidance

Type of Procedure: Major

### Aliases:

6185, 1863, 61864, 61867, 61868, 70557, 70558, 70559 DEEP BRAIN STIMULATOR

## CPT(R) Code for Billing Purposes:

PRIMPELECTRDS, CORT, DRILL, BURR (61850)

PR IMPLANT NEUROELECTRODE (61863)

PR IMPLANT NEUROELECTRDE, ADD'L (61864)

PR IMPLANT NEUROELECTRODE (61867)

PRIMPLANT NEUROELECTRDE, ADDL[61868] PR MRI BRAIN W/O DYE [70557]

PR MRI BRAIN W/ DYE (70558)

PR MRI BRAIN W/O& W/ DYE (70559)

### Comments:

(GENERIC) Burr Hole DBS Electrode Inst w/ MRI

# **Nursing Instructions:**

New System: ClearPoint Neuro. Inc. (Previously MRI Interventions, Inc.)

These are usually bilateral cases, thus 3 each of item should be picked on case cart.

Have in the Room: (Should be picked on case cart) - These 4 boxes are bundled together

# 1. Smart Grid (NGS-SG-01-11) x 3







2. Smart Frame Trajectory (NGS-SF-02-11) x 3



3. Smart Frame Accessory Kit (AK-01-11) x 3





4. Smart Frame Hand Controller (NGS-TE-01) x 3 NEURO OFFICE:



### 1. Loaner Carbon Retractors-Neuro Office

This procedure is done in the Philips MRI (L314), 3 Tesla magnet on the third floor. It is imperative that staff be trained in MRI safety.

Due to the strong magnetic field, any error could result in serious injury or fatality to the patient or team. Please ask if you are unsure of which safety measures to take.

This magnet is much stronger that the intraop magnet in the OR. Do not assume because you've done cases in the OR magnet that you're savvy to magnet issues in the Philips.

### BEFORE OPENING MRI DOORS ALL STAFF MUST PARTICIPATE IN FOLLOWING CHECKLIST:

- All staff do pat down and pocket check for pagers, ID's, watches, hair clips, wallets, phones, etc.
- Scrub and surgeon verify removal from sterile field of following:
- Magnet from needle mat
- Grounding pad
- 25 G needle
- Twist tie from bipolar cord
- Foil from bone wax and suture packs
- Instrument basket and stringer
- Scrub will safely secure magnetic items to remain on sterile field:
- Suture needled
- Safety scalpel
- MR safe burr





All staff check patient of removal of laryngoscope, angio stylets, clipper head and body, non-compatible monitoring electrodes and devices.

Secure Foley drainage bag under mattress.

All non-MRI safe equipment and supplies removed beyond 5 Gauss line.

# SAFETY ALERT!!! DURING CASE ALL STAFF DO PAT DOWN AND POCKET CHECK BEFORE EACH RE-ENTRY TO MRI.

Patient will arrive in preop at 6A, needs IV started and get checked in +MRI screening form to be filled by circulator. The patient will be transported to MRI via gurney, entering through the Interventional Radiology Suite doors. Call for PRO-PACK & 02 tank near end of case to transport patient to PACU. The case will occur in the Magnet suite.

General anesthesia will be induced in Pre-Magnet Suite (L313) behind metal doors that shield the suite from the Magnet suite. Foley placed.

The sterile field will be set up on another plastic gurney in the Pre-Magnet Suite (L313).

All metallic objects will be confined to the Pre-Magnet Suite (L313), AND MUST NEVER GO INTO THE MAGNET ROOM.

-These objects include drills, gas tanks, ALL non-titanium instruments, burrs, magnetic mats, bevies, hypodermic needles, etc.

The scrub and the circulator will do an additional count at the beginning of the case: it will list all of the non-compatible metallic objects.

This count will be rechecked with the attending surgeon and scrub.

After patient is under general anesthesia, patient is moved into magnet suite to begin surgery.

There is a "back room" where the equipment lives: bipolar machine, nitrogen tank. The cords are passed through a hole in the wall. The bipolar pedal is a pneumatic pedal and has a dual end, but it doesn't matter which end is connected to the bipolar machine. The 2 different drill pedals (Anspach and Stryker) live here.



# Instruments/Other:

MRI Titanium Instrument Set - Complete Set - Call to have re-done for "to follow" cases

MRI Titanium Instrument Set #2 - Not an exact duplicate of the set above, but sufficient enough to get you started for "to follow" cases.

MRI Compatible Drills and Pedals

MRI Titanium Instrument Set - contains Anspach MRI Drill - pedal lives in back room MRI

Titanium Instrument Set #2 - contains Stryker MRI Drill - pedal lives in back room-needs cartridge and diffuser (case cart)

Local 0.25% Marcaine + 0.5% Lidocaine with epi 1:100 00

Raney clips (uses manual applier, qun is not MRI compatible)

MRI SAFE Stryker plating system (SPD Moon 3-8313), will require disposable Medtronic screwdriver

(SPD location shelve 611)





Dressing: Bacitracin ointment, mastisol, telfa, paper tape

Chloraprep: Allow to dry - flammable

Pre-procedure Prep Instructions:

Position Instructions:

Supine

Positioning Information Position #1:

Laterality: Default - Patient Position: SUPINE-BURR HOLE DBS ELECTRODE INST W/ MRI

# Body:

Left Arm Tucked Foam Left Leg Foam Under Knee Blanket Under Knee Right Arm Tucked Foam Right Leg Foam Under Knee Blanket Under Knee

### Instruments:

611190308	10885	CORD BIPOLAR 12FT STER DISP 10-4001 767650	1	0	
230104	46260	Comments: please remove bipolar twist tie and dispose in PRE-MRI suite  COUNTER SPONGE_3230	1	0	PK
611 200206		TIP FIXATION PIN TI NLS6011	2	0	EA
510 040401	20237	CPC MRIDBS 814630	1	0	CS
510040103	60654	PACK HEAD SHAVE 903933 DETERGENT RENUZYME FOAM 32-OZ	1	0	EA
611 CSCRT	44842	61301604584			
611 200401	48049	DRAPE MR PROCEDURE NGS-PD-01 Comments: MRI drape	2	0	EA
611 200402	48048	KIT SMART FRAME UNI-LATERAL CP-	3	0	EA
611 210405		NGS-11 Comments: Need 2 for bilateral cases			
611 020604	4195	PREP SURGICAL 10.5ML CHLORAPREP CHG ORNG 260715	2	0	EA
	3532	STAPLEREMOVER SKINDISP 150462	1	0	EA



# Instruments (continued):

Bin Location 611 200207	PMM# 38144	Description RETAINER DRES MT SPANDAGE 10 X 24	Open 1	PRN 0	NUM Ea
611 030302	23837	CUT STER MT10X24 SPONGE GAUZE 4 X 4 16PLY W/ BAR CODE PK/10 STER SM-4416-7S	2	0	PK
611 190502	19931	BUR ARIA 2.1MM TAPERED ROUTER TI 5550-071-021 Comments : For Stryker MRI Aria drill	0	1	EA
611 190502	19930	BUR ARIA 5.0MM ROUND TI 5550-010-050 Comments: For Stryker MRI Aria drill	1	0	EA
611 190404	2696	BURR MRI 1.4 X 12.8MM FLUTED ROUTER IMRI-S-1R	0		EA
		Comments: For Anspach MRI drill PRN-do not of	pen		
611 190404	16550	BURR MRI 1.8X16MM FLUTED ROUTER IMRI-A-CRN	0		EA
611190405	40431	BURR MRI 6MM FLUTED BALL IMRI-SHD-6B	1	1	EA
		Comments: Anspach MRI drill bit			
611 190503	19936	DIFFUSER PNEUMATIC DRILL 5400-006-	1	0	EA
		000 Comments: For Stryker Aria MRI drill			
611 190302	12574	SCALPEL SURGICAL SZ 20 DISP 3716_2_0	3	0	EA
611 190302	45413	SCALPEL SZ 11 DISP SAFETY D4511	1	0	EA
611 190203	61079	SCREWDRIVER DBS DISP 3550S-02	0	1	EA
611210201	2522	TRAY FOLEY CATH 16FR W/ URINEMETER 902816	1	0	EA
		Comments: Safety Alert! Strong magnetic force Foley bag must be tucked under mattress.			
IMP07A01	20576	LEAD DBS 28CM 0.5MM-SPACED ELECTRODES 3389S-28 Comments: Implant room	3	0	EA



## NEURO MRI TITANIUM SET# 1-"LEAD TECH ITEM"

COLOR: N / A COMPANY STERILIZATION: STEAM

SERVICE: NEU INST. SOURCE: DECONTAMINATION: DECONTAM

TRAY LIST REF.: STORAGE LOC.: BIO-TEST REQ'D No

ASSEMBLED BY SUB LOC: 2s 01 CHARGE CODE:

ASSEMBLED TIME. INST. COUNT: 51
\*\*\*LEAD TECH ITEM\*\*\*ALL ITEMS ARE NON-MAGNETIC. DO NOT SUBSTITUTE.\*DO NOT

HEADER NOTES. SUBSTITUTE TRAY-MUST BE METAL FREE/MRI COMPATIBLE\* \*\*\*HANDWASH ONLY\*\*\*

SIM Item #	Mfg Nbr	Description	Proc. Item#	Tracked	Qty	1	2	3	4
DURA HOL		AGNETIC. DO NOT SUBSTITUTE HAND WASH ONLY!!!	,			0-70			
121139	KM83-514	CLAMP MOSQUITO TITANIUM CURVED 5 INCH			8				
36541	FLO 862.22	CLAMP KELLY TITANIUM CURVED 7"			2				
121140	KM83-721	NEEDLEHOLDER WEBSTER TITANIUM 5 INCH			1				
121141	KM83-716	NEEDLEHOLDER VASCULAR TITANIUM 7 INCH	· ·		2				
121142	65-2414	NEEDLEHOLDER MAYO HEGAR MAGNAFREE TITANIUM 7 INCH			2				
121143	KM83-873	SCISSORS METZENBAUM TITANIUM CURVED 7 INCH			1				
121144	KM83-863	SCISSORS MAYO TITANIUM STRAIGHT 6 INCH			1				
123519	KM83-867	SCISSORS MAYO TITANIUM CURVED 6 INCH			1				
121145	KM83-865	SCISSORS SUTURE TITANIUM STRAIGHT SHARP/BLUNT 6 INCH			1				
121146	KM83-870	SCISSORS LAHEY TITANIUM STRAIGHT 6 INCH			-				
121147	KM83-422	FORCEPS ADSON TITANIUM TOOTHED 4 314 INCH			- 1				
36542	KM83-423	FORCEPS ADSON TITANIUM 5"			T				
36543	4503	FORCEPSADSON TITANIUM 6"			1				
121148	KM83-439	FORCEPS POTTS TITANIUM SMOOTH 7 3/4 INCH			1				
121149	KM83-440	FORCEPS POTTS TITANIUM TOOTHED 7 1/2 INCH			1				
121150	KM83-432	FORCEPS BAYONET TITANIUM SMOOTH 8 INCH			2				
121151	KM83-402	FORCEPS BAYONET TITANIUM MICRO 8 1/2 INCH			1				
35834	SP01248269	FORCEPS BIPOLAR TITANIUM			. 1				
123516	KM83-310	DISSECTOR PENFIELD TITANIUM #1			1				
121153	KM83-313	DISSECTOR PENFIELD TITANIUM #4			2				
		DURA HO ALL ITEMS ARE NON-MAGNETIC. DO		oup Count: BSTITUTE.	32				
PAN ALL ITEMS	ARE NON-M	AGNETIC. DO NOT SUBSTITUTE. HAND WASH ONLY!!!							
121138	4241	RULER ALUMINUM 18 INCH			1				
123478	KM83-902	PUNCH KERRISON TITANIUM 3 MM			1.				
121161	KM83-920	RONGEUR PITUITARY TITANIUM 3 MM X 9 MM 7 INCH SHAFT			1				
121164	KM83-150	RETRACTOR CEREBELLAR TITANIUM ANGLED 6 INCH			2				



		PAN Group Count:						
		ALL ITEMS ARE NON-MAGNETIC. DO	O NOT SUBS	STITUTE.	5			L
	D IN TOWEL	C, DO NOT SUBSTITUTE						
25357	IMRI-SAFE	IMRI SAFE MOTOR ASSEMBLY			1			Γ
		WRAPPED IN ITEM IS NON-MAGNETIC, I			1			
PEEL PA ALL ITEM		AGNETIC, DO NOT SUBSTITUTE						
25358	IMRI-SHORT	SHORT ATTACHMENT, IMRI SYSTEM			1			Γ
25359	IMRI-SHORT- HD	SHORT-HD ATTACHMENT, IMRI SYSTEM			1			
25360	IMRI-CRANI-A	CRANI-A ATTACHMENT, IMRI SYSTEM			1		T	Π
37877	ACLAMP	CLAMP BLUE			6			Γ
39019	641-2540-H	RETRACTOR SPRING CARBON FIBER 2.5" 7 Lpb TEETH			2	T	T	Γ
39020	641-2540-ST	RETRACTOR SPRING CARBON FIBER 2.5" 5 Lbp TEETH			2			Γ
		PEE ALL ITEMS ARE NON-MAGNETIC,	L PACK Gro		13			
		NEURO MRI TITANIUM SET# 1-"LEAD TECH	ITEM" Tot	al Count:	51			

Footer NOTES: ALL ITEMS ARE NON-MAGNETIC. DO NOT SUBSTITUTE.



TL 7533: NEURO MRI TITANIUM SET# 2-"LEAD TECH ITEM"

COLOR COMPANY: 1000 STERILIZATION STEAM

SERVICE: NEU INST. SOURCE: DECONTAMINATION DECONTAM

TRAY LIST REF STORAGE LOC.: SPD BIO-TEST REQ'O No STORAGE

ASSEMBLED BY SUB LOC: 2s 01 CHARGE CODE.

ASSEMBLED TIME: INST. COUNT. 42

\*\*\*LEAD TECH ITEM-HANDWASH ONLY\*\*\*ALL ITEMS ARE NON-MAGNETIC. DO NOT HEADER NOTES: SUBSTITUTE\*\*\*DO NOT SUBSTITUTE TRAY-MUST BE METAL FREE/MRI COMPATIBLE\*\*\*

SIM Item #	Mfg Nbr	Description	Proc. Item#	Tracked	Qty	1	2	3	4
DURA HOL		IAGNETIC. DO NOT SUBSTITUTE HAND WASH ONLY	!!!						
37331	TW3015	SCISSORS METZENBAUM CVD7 INCH			1				
37332	TW3016	SCISSORS MAYO STRAIGHT 6 INCH			1		П		
37333	TW3017	SCISSORS LAHEY STRAIGHT 6 INCH			1			П	
37334	TW3013	NEEDLEHOLDER WEBSTER 4.5 INCH			1				
37335	TW3014	NEEDLEHOLDER VASCULAR 7 INCH			2	Г			
37336	TW7019	NEEDLEHOLDER MAYO HEGAR			2				
37337	TW3019	DISSECTOR PENFIELD# 1			1				
37338	TW3020	DISSECTOR PENFIELD# 4			2				
37339	TW7021	FORCEPS BAYONET SMOOTH			2			П	
37340	TW3018	FORCEPS ADSON TOOTHED 4 3/4 INCH			3	Γ	П	$\Box$	
37342	80-2939	FORCEPS BIPOLAR 9 INCH			1				
121163	KM83-141	RETRACTOR WEITLANER 4 X 3 TEETH TITANIUM SHARP 51/2 INCH			1	Г			
37518	TOB-3	FPUNCH KERRISON TITANIUM 3MM PLEASE PUT TIP APPLICATOR OR THE TIP			1	Г	П		Γ
37877	ACLAMP	CLAMP BLUE			6	Г		П	
37329	TW3012	CLAMP MOSQUITO CRV 5 INCH			8				
37330	TW7009	CLAMP KELLY CRV 7 INCH			2				
		DURA H	OLDER Gr	oup Count	35				
BASKET ALL ITEMS	ARE NON-M	AGNETIC. DO NOT SUBSTITUTE HAND WASH ONLY	111						
37162	5400-210-000	DRILL ARIA CORE			1	Г		$\Box$	
37160	5400-210-150	ATTACHMENT STRAIGHT ARIA			1	Г	$\Box$	П	Г
37341	5400-000-000	ATTACHMENT C SHAPED			1				
		E	SASKET Gro	oup Count	3				
PEEL PAC ALL ITEMS		IAGNETIC. DO NOT SUBSTITUTE HAND WASH ONLY	7!!!						
39019	641-2540-7T	RETRACTOR SPRING CARBON FIBER 2.5" 7 Lpb TEETH			2			$\sqcap$	
39020	641-2540-5T	RETRACTOR SPRING CARBON FIBER 2.5" 5 Lbp TEETH			2			$\Box$	
	hi	PEE	PACK Gr	oup Count	4				
		NEURO MRI TITANIUM SET# 2-"LEAD TECH	I ITEM" Tot	tal Count:	42				



# Companies Offering MRI-Safe Equipment

# **Cranial Titanium Instruments:**

# Millineum Surgical:

https://www.surgicalinstruments.com/spine-instruments/titanium-mri-safe-instruments

# MRIEquip:

https://www.mriequip.com/store/pc/Biopsy-Instruments-Non-magnetic-c196.htm

# **Anesthesia Equipment:**

# Avante Medical Surgical:

https://www.dremed.com/catalog/index.php/cPath/603\_600

# Drager:

https://www.draeger.com/en-us\_us/Productselector/Anaesthesia-Workstations/Anaesthesia-Machi-nes?page=1&i=hospital

# **Drills:**

# Stryker:

https://www.stryker.com/us/en/nse/products/aria-drill-system.html

# Synthes (Anspach iMRI drill):

https://www.jnjmedtech.com/en-US/products/power-tools/anspach-high-speed-power-tools

# **Bipolars:**

### Stryker:

https://www.stryker.com/us/en/nse/products/spetzler-malis-disposable-non-stick-bipolar-forceps.html

# Millineum Surgical:

https://www.surgicalinstruments.com/spine-instruments/bipolar-malis-forceps

