

 <p>HAWAII HEALTH SYSTEMS C O R P O R A T I O N <i>"Touching Lives Everyday"</i></p> <p>Policy and Procedures</p>	<p>Department: Information Technology Department</p>	<p>Policy No.: TEL 0015</p>
	<p>Issued by: Barbara Kahana Vice President & CIO</p>	<p>Revision No.: N/A</p>
<p>Subject: <i>Use of the Vidar/Sierra Scanner for Sending TeleRadiological Images Using Surescan Software</i></p>	<p>Approved by: Thomas M. Driskill, Jr. President & CEO</p>	<p>Effective Date: October 17, 2003</p>
		<p>Supersedes Policy: N/A</p>
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I. PURPOSE:

- A. To establish a procedure that lists steps necessary to convert an image on film to a DICOM image using the Vidar Scanner.
- B. To ensure the films are properly digitized for a diagnostic interpretation with the necessary patient information completed before sending the images.
- C. To transmit the DICOM image to the appropriate read station for interpretation.
- D. To provide guidelines for sending images for interpretation if the Teleradiography system is down.
- E. To provide timelines for completion of interpretation of films.

II. POLICY:

- A. The KVMH Radiologist will interpret all films at the Kauai Imaging Center (KIC) once in the afternoon Monday through Friday, except holidays. The Radiologist reviews the report, which has been transcribed by the Voice Recognition System. The report is accepted electronically as a permanent medical record and cannot be altered. The completed medical record is stored electronically and a hard copy of the medical record is indicated "electronically signed" with the Radiologist's signature at the end of the medical record Report. The reports are then routed to the referring Physician and/or Facility Radiology Department for distribution to the patient's chart.
- B. If a STAT report is needed, the sending facility's requesting Physician must call the KVMH Radiologist to consult before a STAT report will be generated (phone # 808-338-9435). STAT interpretations will be available Monday through Friday, 9:00 AM to 5:00 PM, excluding holidays.
- C. If the Teleradiography System goes down, the KVMH Radiology Department will call the sending facilities to inform them of the nature and duration of the downtime. The facilities will make necessary arrangements for the films to be transported to Kauai for interpretation. The sending facilities will call KVMH to inform them of the time of arrival at KVMH. KVMH

will send interpreted films back via the same route. Reports will be faxed as soon as they are completed.

- D. Qualified personnel must perform the radiological exam at the transmitting site.
- E. KVMH will have an Image Management Specialist available in a timely manner in case of malfunction to facilitate return to optimal system functionality.
- F. The equipment used will be in compliance with ACR/NEMA DICOM, incorporating periodic upgrades in a quality control program.
- G. Physicians who provide the official interpretation of images transmitted by teleradiography shall maintain licensure for radiology services at both transmitting and receiving sites as per hospital policies.
- H. The physician performing the official interpretations will be responsible for the quality of the images being reviewed.
- I. Quality control for the teleradiography equipment shall be done weekly by using the SMPTE test pattern. KVMH Radiology Department policies for Quality Control, Safety, and Infection Control will be in effect for the Kauai Imaging Center.

III. DEFINITIONS:

- A. DICOM – Digital Imaging and Communication in Medicine. Transmission standards set for image transfer.
- B. Vidar/Sierra Scanner – A device that scans films and digitizes them for storage and review in a DICOM format.
- C. The 1999 ACR Standard for Teleradiography will be used at KIC to interpret the reports.
- D. Reference JCAHO Standards: I.M. 2.1, I.M. 2.3, Health Information Management, Huffman, 10th edition, Physicians' Record Co., page 107, 1998, and KVMH Medical Staff Rules and Regulations, Section 12.5.1

IV. PROCEDURE:

- A. Take X-ray and process per facility procedure.
- B. Transport developed image to Vidar/Sierra Scanner location.
- C. Turn on the Vidar Scanner if not already on. There is a 90-second warm-up period if Scanner is not on. Turn on the computer and the computer monitor. Before the computer is turned on, the Vidar Scanner must be on, if not possible or it is off, turn on Vidar Scanner and wait about two minutes before turning computer on.
- D. If the "Surescan" program should not come up automatically, click on the icon for Surescan.
- E. Enter password and user ID information, if requested.

- F. Place film in Scanner as you would if you were viewing it on a view box.
- G. Align the left edge of the film with the film guide on the left of the multi-sheet feeder.
- H. Drop the film or film in the slot in front of the blue area (The Sierra Scanner has no blue line, just line the X-ray up, only five at a time may be scanned.). When the digitizer senses the film, it automatically feeds the film into the digitizer in preparation for a scan. For the Vidar Scanner up to 20 films can be placed in front of the blue area. Align the left edge of the film stack with the film guide on the left of the multi-sheet feeder. If the patient has any comparison films, please put them in last (in front of stack, to be scanned last).
- I. On the computer screen note the icons on the left side. The top icon is the "New Study" icon. Click on this icon to enter new patient information. This must be entered each time a new study has been done. The fields in red are MUST enter fields. The report generating software needs this information. The information needed MUST be complete and accurate or the final report will not be completed.
 - 1. PATIENT NAME: Last name, first name
 - 2. PATIENT ID: Patient's medical record number, include the facility ID first (this is very important for storage of the images, see Attachment A for facility number) 358xxxx, no spaces. If no medical record number, put facility ID then patient's birthday; 35805251955, no spaces.
 - 3. PATIENT SEX: Male, Female
 - 4. PATIENT DOB: xx/xx/xxxx, complete using all digits and backslash.
 - 5. STUDY DATE AND TIME: Must have correct DOS (date of service), the date the study was done, and it must be changed if study was done on another day.
 - 6. FACILITY NAME: Sending facility name (Leahi, Mahelona).
 - 7. STATION NAME: Note location of patient (i.e., Nursing Unit- North Trotter, Fax 338-9480), Indicate OP (Outpatient), IP (Inpatient), or ED (Emergency Department). (This may not be in RED.)
 - 8. REQUESTING PHYSICIAN: First and last name must be included to input on report, if we do not know first name, the report cannot be made.
 - 9. STUDY DESCRIPTION: Chest, 71020 (see attachment B)
 - 10. REASON FOR STUDY: (Must include)
 - a. If Industrial Accident (IA): Date of injury, how injury occurred.
 - b. If no injury: Length of pain, illness, or symptom, such as pain, cough, fever, and duration.
 - c. List Left or Right side, or RUQ, LUQ, LLQ, RLQ, Mid chest or Abdomen pain.

11. SERIES NUMBER AND MODALITY: Should default to CR.

Once all information is entered on this screen, click the save button on the bottom right of the screen. This will take you back to the main menu or screen.

- J. Click "Acquire Image" icon on left of screen. Click "Yes" to confirm on "Adding films to correct patient" screen.
- K. Click "Scanner Options" to review the parameters that have been automatically set. Normal settings are Resolution 150, Bit Image – 12, and calibrate daily. Ensure correct settings and OK.
- L. Click "Start Scanning" – The Scanner will scan the study that is closest to the back of the stack first. Please put the most recent film in first if there are comparison films to be scanned. The images will begin to be scanned. You can see the progress of scanning at the bottom tool bar on the screen. When all images have been scanned, the system will revert to the main screen.
- M. Click "View Image" to edit the image before sending. Page forward or backward to review each image.
- N. Click "Image Function" and use the icons on the left to manipulate the image. Right click mouse, hold down, and move mouse over image to lighten or darken. Ensure image is facing correctly and density is maximized. When completed and reviewed, click "save changes" at the bottom of the icons on the left side of screen. OK information screen (image has been saved). Click "closed" on bottom left of screen to return to main menu.

Highlight name of patient to be sent (must highlight the new patient name, not an old name) and click "Transmit study" icon on left of screen. Pick location to send films, highlight, and check "HHSC". This will send the image to the server for the radiologist to pick up and interpret. This takes a few minutes before anything else can be sent. The status of the send will be noted on the patient's name at top of main menu (sent or not sent). Clicking the 'Transmit Queue' icon allows you to check on the progress of the images you just sent. It will tell you if the image was sent or not.

When you are completed with your transmission, you may exit the "Surescan" program. Click on "File" at the top left of the main menu screen. Then click on "Exit."

- O. If you have a problem with the system, call your REST person. If the REST person is not available, please call the KVMH Radiology Department at 808-338-9435.

- Attachments:**
- A. Facility ID and Contacts for Teleradiology
 - B. X-RAYS

FACILITY ID AND CONTACTS FOR TELERADIOLOGY

HOSPITAL	PHONE NO.	ID NO.	CONTACT PERSON
KULA	878-1221	371	DON- Virgie
MAUI	244-9056	355	IT- Ed
LANAI	565-6411	358	Dixie
HILO	974-4733	350	
HAMAKUA	775-7211	351	Bill
KAU	928-8331	352	Donna
KONA	322-4474	354	
KOHALA	889-6211	353	Rocque
LEAHI	733-7959	320	Richard
MALUHIA	832-3000	365	
KVMH	338-9435	359	Ray
SMMH	823-4119	373	Peggy

Attachment B

X-RAYS

CDM	NO.	DESCRIPTION	CPT CODE
320	0030	EYE-FOREIGN BODY	70030
320	0100	MANDIBLE <4 VIEWS	70100
320	0110	MANDIBLE MIN 4 VIEWS	70110
320	0120	MASTOIDS <3 VIEWS/SIDE	70120
320	0130	MASTOIDS MIN 3 VIEWS/SIDE	70130
320	0134	INTERNAL AUDITORY CANALS	70134
320	0140	FACIAL BONES <3 VIEWS	70140
320	0150	FACIAL BONES MIN 3 VIEWS	70150
320	0160	NASAL BONES MIN 3 VIEW	70160
320	0170	NASOLACRIMAL DUCT	70170
320	0190	OPTIC FORAMINA	70190
320	0200	ORBITS MIN 4 VIEWS	70200
320	0210	SINUS SERIES <3 VIEWS	70210
320	0220	SINUS SERIES MIN 3 VIEWS	70220
320	0240	SELLA TURCICA	70240
320	0250	SKULL SERIES < 4 VIEWS	70250
320	0260	SKULL SERIES MIN 4 VIEWS	70260
320	0330	TMJ'S-OPEN & CLOSED BIL	70330
320	0360	NECK SOFT TISSUES	70360
320	1010	CHEST SINGLE VIEW	71010
320	1020	CHEST 2 VIEWS	71020
320	1021	CHEST 3 VIEWS	71021
320	1022	CHEST 3 VIEWS W/OBLIQUE	71022
320	1030	CHEST COMP MIN 4 VIEWS	71030
320	1035	CHEST SPECIAL VIEWS	71035
320	1100	RIBS UNILATERAL 2 VIEWS	71100
320	1101	RIBS UNILAT 2 VIEW & CHEST	71101
320	1110	RIBS BILATERAL 3 VIEWS	71110
320	1111	RIBS BI & CHEST MIN 4 VIEWS	71111
320	1120	STERNUM MIN 2 VIEWS	71120
320	1130	STERNOCLAVIC JOINTS MIN 3	71130
320	2010	SPINE ENTIRE AP & LAT	72010
320	2020	SPINE SINGLE VIEW	72020
320	2040	C-SPINE AP & LAT	72040
320	2050	C-SPINE W/OBLIQUE	72050
320	2052	C-SPINE COMP W/OBLFLX-EX	72052
320	2070	T-SPINE AP & LAT	72070
320	2072	T-SPINE AP LAT SWIMMERS	72072
320	2074	T-SP COMP W/OBL MIN 4 VIEWS	72074
320	2080	T-L SPINE AP & LAT	72080
320	2090	SCOLIOSIS SERIES	72090
320	2100	L-S SPINE AP & LAT	72100
320	2110	L-S SPINE COMP W/OBLIQUE	72110
320	2114	L-S SPINE COMP BENDING	72114

320	2120	LS- SP BEND ONLY 4VW MIN	72120
320	2170	PELVIS AP	72170
320	2190	PELVIS COMP MIN 3 VIEWS	72190
320	2200	S-I JOINTS < 3 VIEWS	72200
320	2202	S-I JOINTS 3 > VIEWS	72202
320	2220	SACRUM & COCCYX MIN 2 VIEWS	72220
320	3000	CLAVICLE COMP	73000
320	3010	SCAPULA COMPLETE	73010
320	3020	SHOULDER 1 VIEW	73020
320	3030	SHOULDER COMPLETE MIN 2	73030
320	3050	A-C JOINT BILATERAL	73050
320	3060	HUMERUS MIN 2 VIEWS	73060
320	3070	ELBOW AP & LAT	73070
320	3080	ELBOW COMPLETE MIN 3 VIEWS	73080
320	3090	FOREARM AP & LAT	73090
320	3092	UPPR EXTR INFANT MIN 2 VIEWS	73092
320	3100	WRIST AP & LAT	73100
320	3110	WRIST COMPLETE MIN 3 VIEWS	73110
320	3120	HAND 2 VIEWS	73120
320	3130	HAND MIN 3 VIEWS	73130
320	3140	FINGER(S) MIN 2 VIEWS	73140
320	3500	HIP UNILATERAL 1 VIEW	73500
320	3510	HIP COMPLETE MIN 2 VIEWS	73510
320	3520	HIPS BILAT MIN 2 W/AP PELVIS	73520
320	3540	PELVIS & HIP INF CHILD 2 MIN	73540
320	3550	FEMUR AP & LAT	73550
320	3560	KNEE AP & LAT	73560
320	3564	KNEE W/TUNNEL PAT STAND	73564
320	3590	TIBIA & FIBULA AP & LAT	73590
320	3592	LOWR EXTR INFANT MIN 2 VIEWS	73592
320	3600	ANKLE AP & LAT	73600
320	3610	ANKLE COMPLETE MIN 3	73610
320	3620	FOOT LIMITED	73620
320	3625	FOOT & ANKLE	73625
320	3630	FOOT COMPLETE MIN 3	73630
320	3650	CALCANEUS MIN 2 VIEWS	73650
320	3660	TOE(S) MIN 2 VIEWS	73660
320	4000	KUB	74000
320	4010	ABD AP & AD OBLIQ & CONE VIEWS	74010
320	4020	FLAT & UPRT ABDOMEN	74020
320	4022	ABDOMEN COMP ACUTE SERIES	74022