Sl ide 1	Quality Control Testing of Stereotactic Breast Biopsy Units: Lorad Maynard High, PhD New York Medical College	QC Testing Recommendations for Stereotactic Breast Biopsy Units • ACR accreditation recommendations • State requirements • Manufacturer's recommendations • Technologist & Physicist QC
Slide 3	Technologist QC Tests Reviewed by physicist Physicist must know how to perform tests to properly review 	Physicist's Annual Survey (ACR) 1) Unit assembly eval. 8. Exposure and Dose 2) Collimation assess. 9. Image Quality 3) Focal spot/resolution 10. Artifact Evaluation 4) kVp accuracy/repro. 11. Localization accuracy 5) HVL accuracy 6) AEC or Manual exposure assessment 7) Digital receptor uniformity
Slide 5	Learn Before Starting: • Connections (upright DSM) • Power startup • Getting into the program • Running the program • Data analysis menus • Exiting the program • Power shutdown	Соок ат вебове уоу утакт и и и и и и и и и и и и и и
Slide 7	Getting StartedIf you have an upright steree, LET TRAINED TECHNOLOGIST MAKE ALL CONNECTIONSImage: started bit of the started cobles when power is on.	Physicist's Annual Breast Biopsy Equipment Quality Control Tests As per ACR Accreditation Program



Slide 17	6) AEC or Manual Exposure Assessment :	Lorad Manual Exposure Assessment :
	 Need to evaluate DR# using clinical technique for 4, 6, 8 cm phantom. 	Thickness Performance:
	. Performence Criterie	at image center from 4 cm
	• Performance Criteria:	4 cm 512 20 96 3699 6 cm 512 29 273 3860 -1%
	of 4 cm.	8 cm 512 32 322 3086 -21%
	b) DR# should meet Lorad target of	4 cm 1024 28 192 3876
	4000 (512) / 6000 (1024).	8 cm 1024 34 350 (max) 2462 -36%
Slide 19	 LORAD AUTO TIME MODE: Coming Soon! The DSM camera enclosure has been modified to allow X-rays that pass through the phosphor screen to be collected by an AEC sensor. Target digital number is 4000 in 512 mode and 6000 in 1024 mode. Our specification is, target ±10%. 	 7) Digital Receptor Uniformity: 4 cm lucite or BR-12 Expose with clinical technique Measure SNR = Mean/SD in center and each corner Performance Criteria: Corner SNR's within 15% of Center SNR
Slide 21	Digital Receptor Uniformity: Lorad Protocol	Lorad "Hidden" Statistics Functions:
	 28 kVp mAs for DR# =4000 Measure SNR's with <u>TOOLS/STATS</u> at specified locations. 32 x 32 pixel ROI - set with trackball. Lorad spec +/-20% of SNR(center). 	Press "S" key on keyboard when ROI is displayed to obtain: 1) STANDARD DEVIATION 2) SIGNAL / NOISE
Slide 23	<section-header><section-header></section-header></section-header>	Effect of Collimation on UniformityImage: State of the state of



