FDA Update

Alberto Gutierrez, Ph.D.
Food and Drug Administration
Office of *In Vitro* Diagnostics and Radiological Health (OIR)

November 20, 2015
IVD Roundtable
White Oak

Summary

- Organizational Update
- Presidential Initiatives
- Approvals an Authorizations
- Guidances
- Workshops and Panels

Organizational Information

- OIR – approx. 280
- New Reviewers
- New Program Support
- Some Changes in Management
- Personalized Medicine/LDT Policy Enhanced

OIR Organizational Update

Director
Alberto Gutierrez, Ph.D.

Deputy Director for New Product Evaluation
Donald St. Pierre

Deputy Director for Patient Safety and Product Quality
James L. Woods

Deputy Director for Radiological Health
Mary S. Pastel, Sc.D.

Deputy Director for Personalized Medicine and Molecular Genetics
Elizabeth A. Mansfield, Ph.D.

Chief Medical Officer
Robert Becker, M.D.

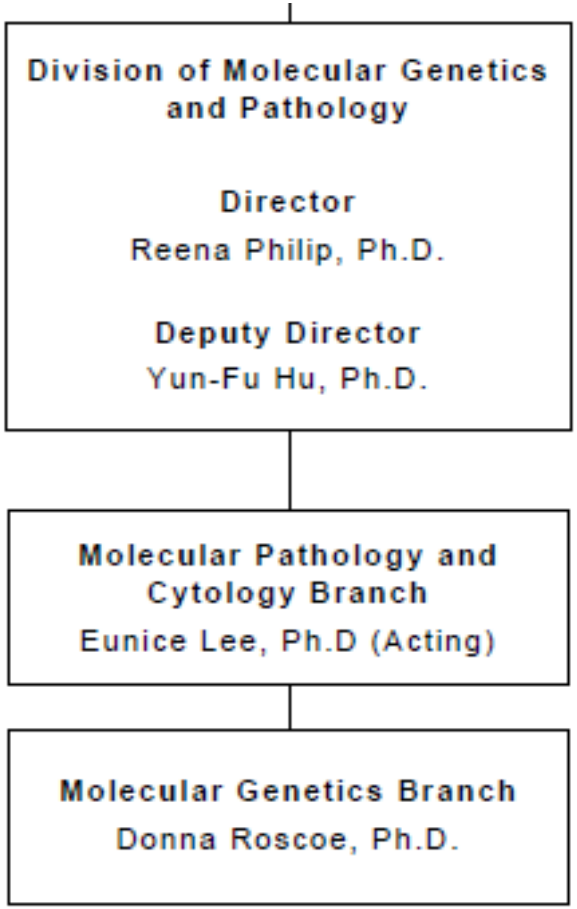
Chief Medical Officer for Radiological Health
Donald L. Miller, M.D.

Secretary
Christine Kellerman

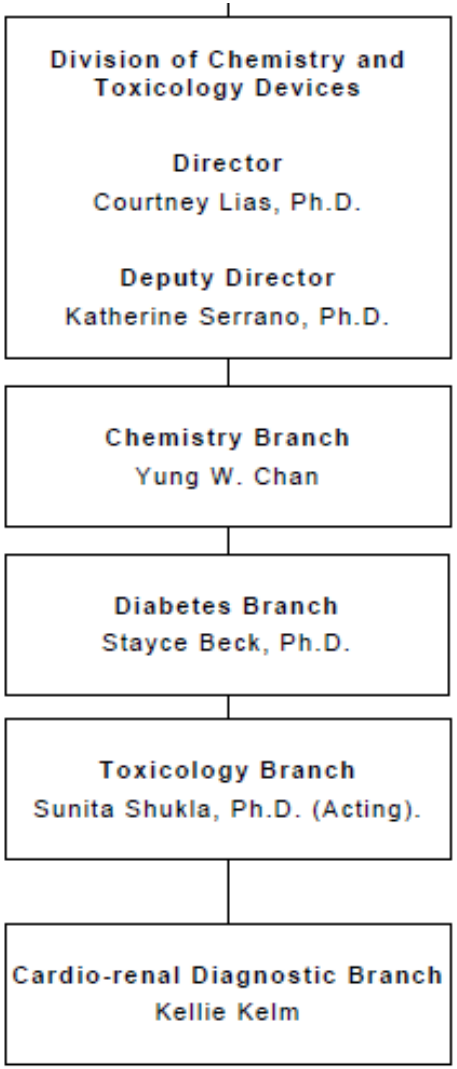
DIHD


Division of Immunology and Hematology Devices
Director
Leonthena Carrington, M.S., MBA, MT
Deputy Director
Kelly Oliner, Ph.D.
Hematology Branch
Cheng Zhang
Immunology and Flow Cytometry Branch
Elizabeth A. Stafford,Ph.D.

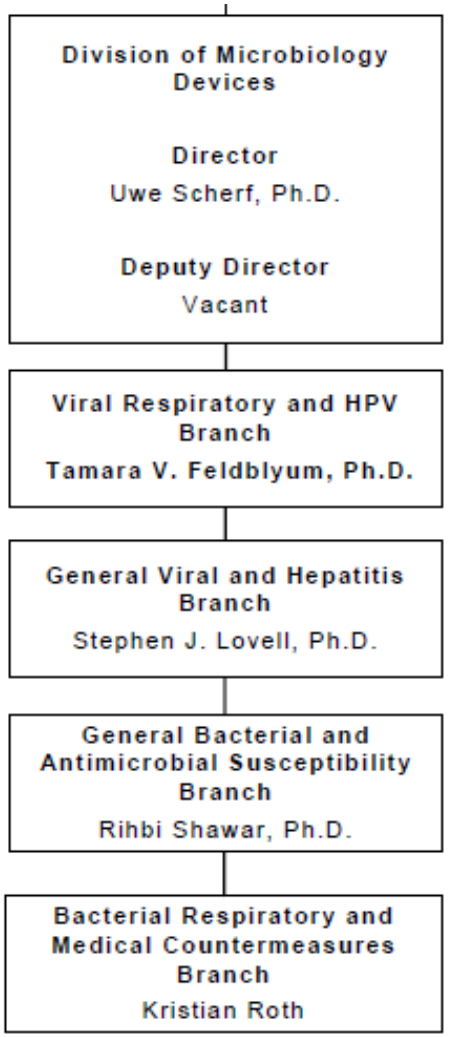
DMGP


Division of Molecular Genetics and Pathology
Director
Reena Philip, Ph.D.
Deputy Director
Yun-Fu Hu, Ph.D.
Molecular Pathology and Cytology Branch
Eunice Lee, Ph.D (Acting)
Molecular Genetics Branch
Donna Roscoe, Ph.D.

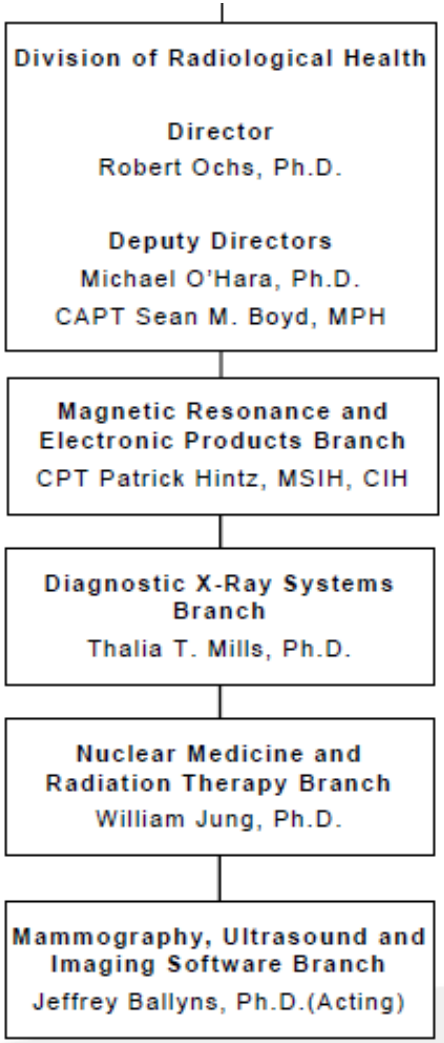
DCTD


Division of Chemistry and Toxicology Devices
Director
Courtney Lias, Ph.D.
Deputy Director
Katherine Serrano, Ph.D.
Chemistry Branch
Yung W. Chan
Diabetes Branch
Stayce Beck, Ph.D.
Toxicology Branch
Sunita Shukla, Ph.D. (Acting).
Cardio-renal Diagnostic Branch
Kellie Kelm

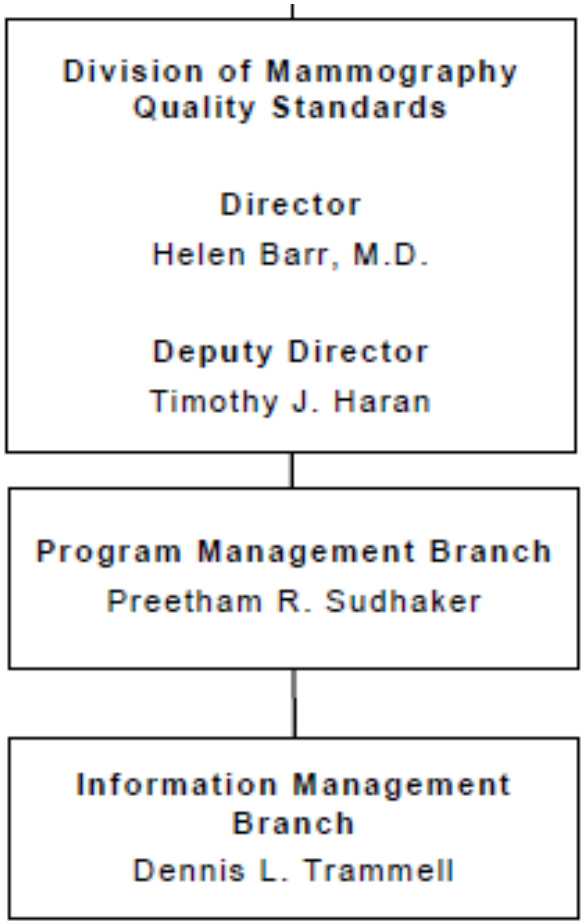
DMD


Division of Microbiology Devices
Director
Uwe Scherf, Ph.D.
Deputy Director
Vacant
Viral Respiratory and HPV Branch
Tamara V. Feldblyum, Ph.D.
General Viral and Hepatitis Branch
Stephen J. Lovell, Ph.D.
General Bacterial and Antimicrobial Susceptibility Branch
Rihbi Shawar, Ph.D.
Bacterial Respiratory and Medical Countermeasures Branch
Kristian Roth

DRH


Division of Radiological Health
Director
Robert Ochs, Ph.D.
Deputy Directors
Michael O'Hara, Ph.D.
CAPT Sean M. Boyd, MPH
Magnetic Resonance and Electronic Products Branch
CPT Patrick Hintz, MSIH, CIH
Diagnostic X-Ray Systems Branch
Thalia T. Mills, Ph.D.
Nuclear Medicine and Radiation Therapy Branch
William Jung, Ph.D.
Mammography, Ultrasound and Imaging Software Branch
Jeffrey Ballyns, Ph.D.(Acting)

DMQS


Division of Mammography Quality Standards
Director
Helen Barr, M.D.
Deputy Director
Timothy J. Haran
Program Management Branch
Preetham R. Sudhaker
Information Management Branch
Dennis L. Trammell

DPOM

- Program Management Team:
  - Administrative and program management operations
  - Consists of management analysts, a program support specialist, and a Secretary
- Scientific Program Team:
  - Analogous to ODE's regulatory advisors, some front office staff, and program operations staff (510(k), PMA, IDE, Q-sub, CLIA etc.)
  - Supports MDUFA, and LDT efforts
- Digital Health Team:
  - Digital Health policy and operations support to CDRH.

DPOM

Duffy Warren, Director		
Debra Cooper, Program Management Officer	**Brendan O'Leary**, Deputy Director	
Program Management Team	**Scientific Program Team**	**Digital Health Team**
		Cathy Oliveri, Digital Health Team Leader
Nancy (Naziha) Hanna, Program Specialist	**Sara Aguel**, Policy Analyst (IT Lead)	**Atiq Chowdhury**, Policy Analyst (On detail to DPOM)
Renita Hoard, Management Analyst (Timekeeping, Purchasing, and Property)	**Elaine Blyskun**, Policy Analyst (On Detail to DPOM, IDE and Q-Submission Lead, Postmarket Process Improvement)	**Nicky (John) Grimes**, Policy Analyst
Katy Klyushina, Management Analyst (Budget)	**Avis Danishefsky**, Policy Analyst (PMA Lead)	**Andy (Andrew) Grove**, Policy Analyst (IVDs, Instrumentation)
Wanda Myers, Management Analyst (Human Resources)	**Daniel Dill**, Policy Analyst (Postmarket and Analytics)	**Kylie Haskins** (On detail to DPOM)
Waleska Rodriguez Gonzalez, Management Analyst (Human Resources)	**Lisa (Elizabeth) Fife**, Management Analyst (510(k) Program)	**Anne Hurley**, Technical Writer / Editor
Debbie Schonemann, Management Analyst (Travel and Training)	**Jerry Logue**, Policy Analyst (IT, Process Improvement, Analytics)	**Dharmesh Patel**, Policy Analyst (Cybersecurity)
Tina Smith, Lead Management Analyst (Budget)	**Toby Lowe**, Policy Analyst (MDUFA IV, LDT)	**Kenneth Randle**, Management Analyst (Project Management)

DPOM

Duffy Warren, Director		
Debra Cooper, Program Management Officer	**Brendan O'Leary**, Deputy Director	
Program Management Team	**Scientific Program Team**	**Digital Health Team** **Cathy Oliveri**, Digital Health Team Leader
Denise Townsend, Management Analyst (Human Resources)	**Nick Pastelak**, Management Analyst (DCC/ Radiological Health, Process Improvement, Training)	**Vacant**, Policy Analyst
Allen Webb, Management Analyst (Budget, Human Resources)	**Rob Sauer**, Policy Analyst (Device Determinations, Radiological Health, Digital Health)	**Vacant**, Policy Analyst
Shantel Wright-Hines, Secretary	**Fatemeh Razjouyan**, Policy Analyst (510(k) Program)	
Vacant, Management Analyst	**Victoria Scharf**, Consumer Safety Technician (PMA, CLIA)	
	Peter Tobin, Commissioner's Fellow (CLIA Lead, Process Improvement)	
	Kelly Wilkicki, Policy Analyst (On detail to OCD, DPOM Third Party Program Lead)	
	Markus Yap, Policy Analyst (Process Improvement)	
	Vacant, Policy Analyst (Radiological Health)	

Medical Countermeasures Initiative (MCMi)

- 2010- FDA launches MCMi: to identify and resolve regulatory challenges to MCM development- (drug/vaccine/device/diagnostics)
- 2013- Pandemic and All-Hazards Preparedness Reauthorization Act (PAHPRA): new legal authorities for FDA to support preparedness and response efforts
- Emergency Use Authorization (EUA): Rapid interactive FDA review process- 1st=2009 H1N1

MCM Diagnostic 510(k)s - 2014-15

- CDC PCR *B. anthracis* detection cleared
- Pandemic Influenza: 3 new and 14 modifications to existing tests cleared
- Several bio-threat diagnostic assays, single and multiplex in the pipeline
- Monthly discussions held with CDC (LRN) and DoD

Emergency Use Authorizations - 2014-2015

- H7N9 Avian Influenza- 2 assays authorized
- MERS-CoV-asymptomatic contacts added to intended use. Stakeholder Workshop 4/15. 2 assays authorized
- Ebola Zaire - 10 diagnostic assays (commercial & non-commercial –CDC/DoD) authorized – “presumptive detection of ebola nucleic acid or antigen”. WHO/FDA collaborative reviews
- Enterovirus D68- emergency declared 3/15, one assay authorized

National Action Plan for Combating Antibiotic- Resistant Bacteria (CARB)

- Streamline regulatory processes for updating (breakpoints) and clearing new AST devices
- CDC/FDA developing well characterized, publically available microbial resistance strain panel for anti-microbial resistance Dx and Tx developers
- Develop and maintain sequence data base of resistant pathogens (ARGOS collaboration)

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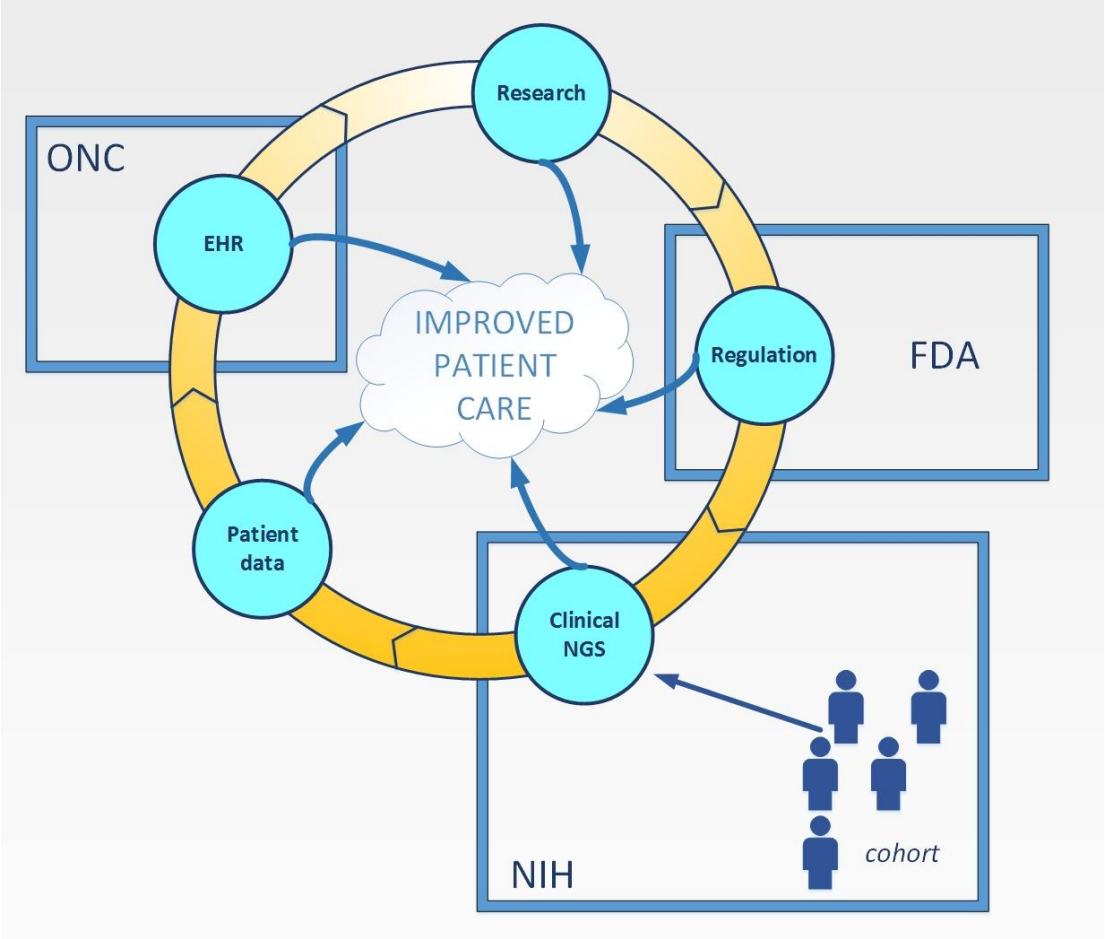
The President's Precision Medicine Initiative (PMI)

To enable a new era of medicine through research and technology that empowers patients, researchers, and providers to work together toward development of individualized treatments.

Precision Medicine Initiative



PMA Approvals IVDs

- Roche's cobas® KRAS Mutation Test
  - aid in the identification of CRC patients for whom treatment with Erbitux® (cetuximab) or with Vectibix® (panitumumab) may be indicated based on a no mutation detected result.

- Gastric Emptying Breath Test (GEBT)
  - for use in the measurement of the rate of gastric emptying of solids and as an aid in the diagnosis of delayed gastric emptying (gastroparesis) in adult humans who are symptomatic for gastoparesis.

PMA Approvals IVDs

- Elecsys® Anti-HCV II Immunoassay and Elecsys® PreciControl Anti-HCV
  - aid in the presumptive diagnosis of HCV infection in persons with signs and symptoms of hepatitis and in persons at risk for hepatitis C infection.

- VENTANA ALK (D5F3) CDx Assay
  - aid in identifying patients eligible for treatment with XALKORI® (crizotinib).

PMA Approvals IVDs

- Roche's cobas® HBV Test
  - aid in the management of patients with chronic hbv infection undergoing anti-viral therapy.

- Roche's cobas® HCV Test
  - aid in the diagnosis of hcv infection in the following populations: individuals with antibody evidence of hcv with evidence of liver disease, individuals suspected to be actively infected with hcv antibody evidence, and individuals at risk for hcv infection with antibodies to hcv.

PMA Approvals IVDs

- Dako's PD-L1 IHC 22C3 PHARMDX
  - aid in identifying nsclc patients for treatment with keytruda (pembrolizumab).
- Dako's PD-L1 IHC NIVOLUMAB PHARMDX
  - associated with enhanced survival from opdivo (nivolumab).
- Dexcom's G4 Platinum (Pediatric) Continuous Glucose Monitoring System

PMA Approvals IVDs

- T:SLIM G4 INSULIN PUMP WITH DEXCOM G4 PLATINUM CGM
  - Sensor augmented insulin pump.

- Roches's KRAS Mutation Test
  - aid in the identification of CRC patients for whom treatment with Erbitux® (cetuximab) or with Vectibix® (panitumumab) may be indicated based on a no mutation detected result.

De Novo Classifications

- Abbott's Vysis EGR1 FISH Probe Kit
  - An early growth response 1 (EGR1) gene fluorescence in-situ hybridization (FISH) test system is intended to detect the EGR1 probe target on chromosome 5q in bone marrow specimens from patients with acute myeloid leukemia (AML) or myelodysplastic syndrome (MDS). The assay results are intended to be interpreted only by a qualified pathologist or cytogeneticist.

De Novo Classifications

- Affymetric's CytoScan DX

  CytoScan® Dx Assay is a qualitative assay intended for the postnatal detection of copy number variations (CNV) in genomic DNA obtained from peripheral whole blood in patients referred for chromosomal testing based on clinical presentation.

De novos

- Dexcom's STUDIO on the Cloud Data Management Software

  – for use by both patients and healthcare professionals to assist people with diabetes and their healthcare professionals in the review, analysis, and evaluation of historical CGM data to support effective diabetes management.

De novos

- EnLite™ Neonatal TREC Kit
  - an aid in screening newborns for severe combined immunodeficiency disorder (SCID)

De novos

- 23andMe Personal Genome Service Carrier Screening Test for Bloom Syndrome

De novos

- NOVA View Automated Fluorescense Microscope

De Novo Classifications

- BioFire's FilmArray Meningitis/Encephalitis (ME) Panel
  - cerebrospinal fluid (CSF) nucleic acid-based test for simultaneous detection of multiple pathogens that can cause central nervous system infections.

CLIA Waivers by Application

- Alere's ™ Influenza A & B
- Alere I Strep A
- Roche's cobas Liat System Influenza A/B
- Roche's cobas Liat System Strep A
- Therano's HSV-1 Assay

Final Guidances

- Medical Device Data Systems, Medical Image Storage Devices, and Medical Image Communications Devices
- Expedited Access for Premarket Approval and De Novo Medical Devices Intended for Unmet Medical Need for Life Threatening or Irreversibly Debilitating Diseases or Conditions
- Balancing Premarket and Postmarket Data Collection for Devices Subject to Premarket Approval

Final Guidances

- Class II Special Controls Guideline: Multiplex Nucleic Acid Assay for Identification of Microorganisms and Resistance Markers from Positive Blood Cultures

- Content and Format for Abbreviated 510(k)s for Early Growth Response 1 (EGR1) Gene Fluorescence In-Situ Hybridization (FISH) Test System for Specimen Characterization Devices

Draft Guidances

- Adaptive Designs for Medical Device Clinical Studies
- Technical Performance Assessment of Digital Pathology Whole Slide Imaging Devices
- Procedures for Meetings of the Medical Devices Advisory Committee
- Medical Device Accessories: Defining Accessories and Classification Pathway for New Accessory Types

Draft Guidances

- Acceptance of Medical Device Clinical Data from Studies Conducted Outside the United States
- Leveraging Existing Clinical Data for Extrapolation to Pediatric Uses of Medical Devices
- Patient Preference Information Submission, Review in PMAs, HDE Applications, and De Novo Requests, and Inclusion in Device Labeling

Draft Guidances

- Factors to Consider When Making Benefit-Risk Determinations for Medical Device Investigational Device Exemptions (IDEs)
- Unique Device Identification: Direct Marking of Devices

Notable Meetings

- Workshop - 8th Annual Medical Device and Diagnostics Statistical Issues, Co-Sponsored by AdvaMed and FDA, April 29-30, 2015

- Public Workshop FDA/CDC/NLM Workshop on Promoting Semantic Interoperability of Laboratory Data, September 28, 2015

- Public Workshop - Non-Microbial Biomarkers of Infection for In Vitro Diagnostic Device Use, October 16, 2015

Notable Meetings

- Public Workshop - In Vitro Diagnostic Testing for Direct Oral Anticoagulants, October 26, 2015

- Public Workshop - Use of Databases for Establishing the Clinical Relevance of Human Genetic Variants, November 13, 2015

Thanks