

CURRICULUM VITAE

Date of Revision: 11/09/2016

Name: Catherine Anne Welch Dinauer, M.D.

Appointment: Clinician, Department of Surgery (Primary)
Clinician, Department of Pediatrics (Secondary)

Term: *Primary Appointment:* July 1, 2016 to June 30, 2017
Secondary Appointment: July 1, 2016 to June 30, 2017

School: Yale University School of Medicine

Education

A.B. Dartmouth College (Psychology modified with Education) 1987
M.D. University of Vermont College of Medicine 1991

Career/Academic Appointments:

1991-92 Intern, Pediatrics, Walter Reed Army Medical Center, Washington, DC
1992-94 Resident, Pediatrics, Walter Reed Army Medical Center, Washington, DC
1994-95 Academic Chief Resident, Pediatrics, Walter Reed Army Medical Center, Washington, DC
1995-98 Fellow, Pediatric Endocrinology, National Capital Area Pediatric Consortium (Walter Reed Army Medical Center, Uniformed Services University of the Health Sciences and National Naval Medical Center), Washington, DC and Bethesda, MD
1995-98 Teaching Fellow, Department of Pediatrics, F. Edward Hèbert School of Medicine, Uniformed Services University of the Health Sciences, Bethesda, MD
1998-01 Staff Attending, Division of Pediatric Endocrinology, Department of Pediatrics, Walter Reed Army Medical Center, Washington, DC
1998-05 Assistant Professor of Pediatrics, Department of Pediatrics, F. Edward Hèbert School of Medicine, Uniformed Services University of the Health Sciences, Bethesda, MD
2001-05 Staff Affiliate, Division of Pediatric Endocrinology, Department of Pediatrics, Walter Reed Army Medical Center, Washington, DC (Red Cross Volunteer)
2004-05 Associate Staff, Section of Pediatric Endocrinology, Department of Pediatrics, Inova Fairfax Hospital, Fairfax, VA
2006-12 Associate Research Scientist, Developmental Endocrinology & Biology, Yale Pediatric Thyroid Center, Department of Pediatrics, Yale School of Medicine, New Haven, CT
2012-present Clinician, Yale Pediatric Thyroid Center, Division of Pediatric Surgery, Department of Surgery, Yale School of Medicine, New Haven, CT

Administrative Positions:

1999-01 Assistant Chief and Chief, Clinical Studies Service, Department of Clinical Investigation, Walter Reed Army Medical Center, Washington, DC
2012-12 Director, Yale Pediatric Thyroid Center, Division of Pediatric Endocrinology, Department of Pediatrics, Yale School of Medicine, New Haven, CT

Board Certification

American Board of Pediatrics, General Pediatrics, 1994, recertified 2001

American Board of Pediatrics, Sub-board in Pediatric Endocrinology, 1999, recertified 2006

Profession Honors and Recognition

International/National/Regional

- 2000: Elected Member, Pediatric Endocrine Society (formerly known as Lawson Wilkins Pediatric Endocrine Society)
- 1999: Elected Member, American Thyroid Association
- 1998: General Graves B. Erskine Award for Outstanding Fellow
- 1998: American Pediatric Society/Society for Pediatric Research, Fellow Clinical Research Award
- 1998: Army Commendation Medal
- 1998: Army Achievement Medal
- 1997: Army Commendation Medal (2)
- 1996: Army Commendation Medal
- 1995: Army Commendation Medal
- 1994: Army Achievement Medal

University

N/A

Grant/Clinical Trials History:

N/A

Invited Speaking Engagements, Presentations, Symposia & Workshops Not Affiliated with Yale:

International/National

- 2015: Speaker, American Thyroid Association Satellite Symposium at ENDO, Pediatric Thyroid Cancer – Highlights, Controversies, and Consensus, San Diego, CA. “TSH Suppression and Surveillance”
- 2014: Meet the Professor, ICE/ENDO 2014 (International Congress of Endocrinology and Endocrine Society 96th Annual Meeting & Expo), Chicago, IL. “Management of Hyperthyroidism in Children”
- 2013: The Endocrine Society Pediatric Endocrine Board Review Course, New Orleans, LA. “Thyroid Hormones and Triiodothyronine”
- 2013: Moderator, Meet the Professor, 2nd World Congress on Thyroid Cancer, Toronto, Canada. “Management of RAI avid distant metastasis in pediatric thyroid cancer”
- 2012: Pediatric Grand Rounds, Nationwide Children’s Hospital, Columbus, OH. “Thyroid Disorders in Children”
- 2012: Pediatric Endocrinology Rounds, Nationwide Children’s Hospital, Columbus, OH. “Thyroid Cancer in Children”
- 2012: Case Management Forum, 94th Annual Meeting of The Endocrine Society, Houston, TX. “Thyroid Cancer in Children”

- 2011: Meet the Professor, American Thyroid Association 82nd Annual Meeting, Indian Wells, CA. “Treatment of Hypothyroidism and Hyperthyroidism in Children”
- 2011: Clinical Symposia (Autoimmune Thyroid Disease: What’s New In Clinical Practice?), 93rd Annual Meeting of The Endocrine Society Boston, MA. “Controversies in the Management of Graves Disease in Children”
- 2007: Clinical Symposia on Pediatric Thyroidology, American Thyroid Association 78th Annual Meeting, New York City, NY. “Thyroid Cancer in Children”
- 1999: Consult the Specialist, 33rd Annual Uniformed Services Pediatric Seminar, Uniformed Services Section of the American Academy of Pediatrics, Norfolk, VA. “Galactosemia”
- 1999: Update on Pediatric Endocrinology, 33rd Annual Uniformed Services Pediatric Seminar, Uniformed Services Section of the American Academy of Pediatrics, Norfolk, VA. “Insulin Resistance”

Regional

- 2015: Department of Pediatrics Grand Rounds, Bridgeport Hospital, Bridgeport CT. “Mildly Abnormal Thyroid Function Tests in Children”
- 2013: Endocrine Grand Rounds, Warren Alpert Medical School of Brown University, Rhode Island Hospital, Providence, RI. “Management of Thyroid Cancer in Children”
- 2013: Department of Pediatrics Grand Rounds, Bridgeport Hospital, Bridgeport, CT. “Approach to Thyroid Disorders in Children”
- 1998: Department of Pediatrics Grand Rounds, Uniformed Services University of the Health Sciences, Bethesda, MD. “Bone Mineral Density in Children”
- 1996: Baltimore-Washington Metropolitan Genetics Conference, Washington, DC. “Lesch-Nyhan Syndrome”

Peer-Reviewed Presentations & Symposia Given at Meeting Not Affiliated with Yale

- 2009: 8th Joint Meeting of the Lawson Wilkins Pediatric Endocrine Society/European Society for Pediatric Endocrinology, New York, NY, “Prevalence and treatment practices of childhood Graves disease in the United States.”
- 2003: Society for Pediatric Research, Seattle, WA, “The MACIS score predicts the clinical course of papillary thyroid carcinoma in children and adolescents.”
- 2000: Annual Meeting, American Academy of Pediatrics Uniformed Services Pediatric Section, Honolulu, HI, “Index of suspicion: Clues to Diagnosing Graves disease in the young child.”
- 2000: Annual Meeting, American Academy of Pediatrics Uniformed Services Pediatric Section, Honolulu, HI, “The expression of Ki-67 antigen is increased in childhood thyroid cancers with lymph node involvement.”
- 1999: 81st Annual Meeting of the Endocrine Society, San Diego, CA, “ VEGF is expressed in the majority of childhood papillary thyroid cancers, directly related to tumor size, and may be associated with an increased risk of recurrence.”
- 1999: 81st Annual Meeting of the Endocrine Society, San Diego, CA, “The apoptosis protective signal protein, Bcl-2, is expressed in childhood papillary thyroid cancer as well as normal thyroid tissue.”
- 1998: 80th Annual Meeting of the Endocrine Society, New Orleans, LA, “Immunohistochemical detection of p53 in childhood thyroid cancers.”
- 1998: 80th Annual Meeting of the Endocrine Society, New Orleans, LA, “N-Ras mutations in childhood thyroid cancer.”

- 1998: 80th Annual Meeting of the Endocrine Society, New Orleans, LA, “Apoptosis in childhood thyroid cancer.”
- 1998: Annual Meeting, American Academy of Pediatrics Uniformed Services Pediatric Section, San Francisco, CA, “Metronidazole: A revolutionary treatment for inborn errors of metabolism.”
- 1997: Annual Meeting, American Academy of Pediatrics Uniformed Services Section on Surgery, New Orleans, LA, “The impact of initial surgical management on outcome in young patients with differentiated thyroid cancer.”
- 1997: 5th Joint Meeting of the European Society for Paediatric Endocrinology and Lawson Wilkins Pediatric Endocrine Society, Stockholm, Sweden, “Recurrence of thyroid cancer in children.”
- 1997: 79th Annual Meeting of the Endocrine Society, Minneapolis, MN, Prognostic features in children with papillary thyroid cancer.”
- 1997: 18th Annual Gary P. Wratten Surgical Symposium, San Diego, CA, “The surgical approach to thyroid cancer in children and young adults-is more better?”
- 1997: Annual Meeting, American Academy of Pediatrics Uniformed Services Pediatric Section, San Antonio, TX, “Predictors of recurrence in differentiated thyroid cancer.”
- 1996: The 10th International Congress of Endocrinology, San Francisco, CA, “Steroid acute regulatory protein mRNA is transcribed in JEG-3 choriocarcinoma cells.”
- 1994: Annual Meeting, American Academy of Pediatrics Uniformed Services Pediatric Section, Seattle, WA, “Two different inhibitors of nitric oxide formation stimulate *in vitro* testosterone production by rat Leydig cell enriched cultures.”
- 1993: Combined Meeting of the American Pediatric Society, Society for Pediatric Research, and Ambulatory Pediatric Association, Washington, DC, “Post-neonatal circumcision: A population profile.”

Professional Service

Peer Review Groups/Grant Study Sections:

- 2001-2004 Ad Hoc Reviewer, Office of Orphan Products Development Grant Program, Food and Drug Administration
- 2000 Government Subject Matter Expert (Diabetes), Congressionally Directed Medical Research Program, Peer Reviewed Medical Research Program, U.S. Army Medical Research and Materiel Command

Journal Service:

Editorial Board

- 2009-2016 *International Journal of Pediatric Endocrinology*

Reviewer

- 2008-present Reviewer for *AACE Journals (Endocrine Practice); Archives of Pediatrics & Adolescent Medicine; Endocrinology, Metabolism and Diabetes Case Reports; Hormone Research; International Journal of Pediatric Endocrinology; Journal of Clinical Endocrinology & Metabolism; Journal of Pediatrics; Journal of Thyroid Research; Pediatrics; Thyroid*

Professional Service for Professional Organizations

International Guideline Harmonization Group (for Late Effects of Childhood Cancer)

2014-present Member, Thyroid Harmonization Study Group, Committee for Consensus Guidelines for Surveillance for Thyroid Cancer in Childhood Cancer Survivors

American Thyroid Association

2016-present Chair, Membership Panel (3-year term)

2013-2016 Member, Membership Panel

2013-present Member, Pediatric Affairs Task Force

2009-2015 Member, Task Force on Pediatric Thyroid Cancer Guidelines

Endocrine Society

2012-2013 Faculty Member, 2013 Pediatric Endocrine Review Board Course

American Medical Women's Association

1994-1996 Branch 1 Secretary

American Academy of Pediatrics

1994-1995 District 1 Alternate Coordinator

1992-1995 Resident Delegate

Public Service:

2013 Speaker, 16th International Thyroid Cancer Survivors Conference, Philadelphia, PA. "Development of the ATA Guidelines for Children with Nodules and Differentiated Thyroid Cancer"

Bibliography

Peer-Reviewed Original Research

1. Wiswell TE, Tencer HL, **Welch CA**, and Chamberlain JL. Circumcision in children beyond the neonatal period. *Pediatrics* 1993, 92(6):791-793.
2. **Welch CA**, Watson ME, Poth M, Hong T, and Francis GL. Two different inhibitors of nitric oxide formation stimulate *in vitro* testosterone production by rat Leydig cell enriched cultures. *Metabolism* 1995, 44(2):234-238.
3. **Dinauer CA**, Patel A, McClellan DR, Salata K, and Francis GL. The ceramide pathway increases cholesterol mobilization and steroidogenic acute regulatory protein mRNA. *Endocrinology and Metabolism* 1997, 4:385-391.
4. Robie DK, **Dinauer CW**, Tuttle RM, Ward DT, Parry R, McClellan D, Svec R, Adair C, and Francis G. The impact of initial surgical management on outcome in young patients with differentiated thyroid cancer. *Journal of Pediatric Surgery* 1998, 33(7):1134-1138.
5. **Welch Dinauer CA**, Tuttle RM, Robie DK, McClellan DR, Svec RL, Adair C, and Francis GL. Clinical features associated with metastasis and recurrence of differentiated thyroid cancer in children, adolescents, and young adults. *Clinical Endocrinology* 1998, 49(5):619-628.

6. **Welch Dinauer CA**, Tuttle RM, Robie DK, McClellan DR, and Francis GL. Extensive surgery improves recurrence-free survival in children and young patients with class 1 papillary thyroid carcinoma. *Journal of Pediatric Surgery* 1999, 34:1799-1804.
7. Fenton C, Anderson J, Lukes Y, **Dinauer CA**, Tuttle RM, Francis GL. Ras mutations are uncommon in sporadic thyroid cancer in children and young adults. *Journal of Endocrinologic Investigation* 1999; 22(10):781-789.
8. Patel A, Fenton C, **Dinauer C**, Tuttle RM, and Francis G. Tyrosine kinase expression is increased in papillary thyroid carcinoma of children and young adults. *Frontiers in Bioscience* 2000, 4:A1-9.
9. Fenton C, Patel A, Lukes Y, **Dinauer C**, Robie D, Tuttle RM, and Francis GL. The expression of vascular endothelial factor and the type 1 vascular endothelial factor receptor are associated with growth of papillary thyroid carcinoma in children and young adults. *Thyroid* 2000, 10(4): 349-357.
10. Ramirez R, Hsu D, Patel A, Fenton C, **Dinauer C**, Tuttle RM, and Francis GL. Over-expression of hepatocyte growth factor/scatter factor (HGF/SF) and the HGF/SF receptor (cMET) are associated with a high risk of metastasis and recurrence for childhood thyroid cancer. *Clinical Endocrinology* 2000; 53(5):635-644.
11. Fenton C, Lukes Y, Nicholson D, **Dinauer C**, Francis GL and Tuttle RM. The *ret*/PTC mutations are common in sporadic papillary thyroid carcinoma of children and young adults. *Journal of Clinical Endocrinology and Metabolism* 2000; 85(3):1170-1175.
12. Gupta S, Patel A, Folstad A, Fenton C, **Dinauer CA**, Tuttle RM, Conran R, Francis GL. Infiltration of differentiated thyroid carcinoma by proliferating lymphocytes is associated with improved disease-free survival for children and young adults. *Journal of Clinical Endocrinology and Metabolism* 2001, 86(3):1346-1354.
13. Straight AM, Patel A, Fenton C, **Dinauer C**, Tuttle RM, and Francis G. Thyroid carcinomas that express telomerase follow a more aggressive clinical course in children and adolescents. *Journal of Endocrinologic Investigation* 2002, 25(4):302-308.
14. Patel A, Straight AM, Mann H, Duffy E, Fenton C, **Dinauer C**, Tuttle RM, and Francis G. Matrix metalloproteinase (MMP) expression by differentiated thyroid carcinoma of children and adolescents. *Journal of Endocrinologic Investigation* 2002, 25(5):403-408.
15. Shah R, Banks K, Patel A, Dogra S, Terrell R, Powers PA, Fenton C, **Dinauer CA**, Tuttle RM, and Francis GL. Intense expression of the b7-2 antigen presentation coactivator is an unfavorable prognostic indicator for differentiated thyroid carcinoma of children and adolescents. *Journal of Clinical Endocrinology and Metabolism* 2002, 87(9):4391-4397.
16. Patel A, Fenton C, Terrell R, Powers PA, **Dinauer C**, Tuttle RM, and Francis GL. Nitrotyrosine, inducible nitric oxide synthase (iNOS), and endothelial nitric oxide synthase (eNOS) are increased in thyroid tumors from children and adolescents. *Journal of Endocrinologic Investigation* 2002, 25(8):675-683.
17. Patel A, Jhiang S, Dogra S, Terrell R, Powers PA, Fenton C, **Dinauer CA**, Tuttle RM, and Francis GL. Differentiated thyroid carcinoma that express sodium-iodide symporter have a lower risk of recurrence for children and adolescents. *Pediatric Research* 2002, 52:737-744.
18. Powers PA, **Dinauer CA**, Tuttle RM, and Francis GL. Tumor size and extent of disease at diagnosis predict the response to initial therapy for papillary thyroid carcinoma in children and adolescents. *Journal of Pediatric Endocrinology & Metabolism* 2003, 16(5):693-702.

19. Powers PA, **Dinauer CA**, Tuttle RM, Robie DK, McClellan DR, and Francis GL. Treatment of recurrent papillary thyroid carcinoma in children and adolescents. *Journal of Pediatric Endocrinology & Metabolism* 2003, 16:1033-1040.
20. Powers P, **Dinauer C**, Tuttle RM and Francis G. The MACIS score predicts outcome for children and adolescents with papillary thyroid cancer. *Journal of Pediatric Endocrinology & Metabolism* 2004, 17(3):339-43.
21. Rivkees SA, Stephenson K, **Dinauer C**. Adverse events associated with methimazole therapy of Graves' disease in children. *Int J Pediatr Endocrinol.* 2010:176970. Epub 2010 Mar 7.
22. Abi-Raad R, Kirk RK, **Dinauer CA**, Prasad A, Morotti RA, Breuer CK, Sosa JA, Udelsman R, Rivkees SA, and Prasad ML. C-cell neoplasia in asymptomatic carriers of RET mutation in extracellular cysteine-rich and intracellular tyrosine kinase domain. *Hum Pathol* 2015: 46(8):1121-8. Epub 2015 May 6.
23. Prasad ML, Vyas M, Horne MJ, Virk RK, Morotti R, Liu Z, Tallini G, Nikiforova MN, Christison-Lagay ER, Udelsman R, **Dinauer CA**, Nikiforov YE. NTRK fusion oncogenes in pediatric papillary thyroid carcinoma in northeast United States. *Cancer* 2016: 122(7):1097-107.

Chapters, Books, and Reviews

24. **Dinauer CA** and Francis GL. Thyroid cancer in children. *Endocrinology and Metabolism Clinics of NA*, 2007, 36(3):779-806.
25. **Dinauer CA**, Breuer C, Rivkees SA. Differentiated thyroid cancer in children: diagnosis and management. *Current Opinions in Oncology.* 2008, 20(1):59-65.
26. Rivkees SA and **Dinauer C**. The Use of 131-Iodine in the Treatment of Graves Disease in Children in Comprehensive Handbook of Iodine: Nutritional, Endocrine, and Pathological Aspects, ed. Preedy VR, Burrow GN, and Watson RR, Elsevier Inc., Oxford, UK, 2009, pp 943-955.
27. Rivkees SA, Mazzaferri EL, Verburg FA, Reiners C, Luster M, Breuer CK, **Dinauer CA**, Udelsman R. The treatment of differentiated thyroid cancer in children: emphasis on surgical approach and radioactive iodine therapy. *Endocrine Reviews.* 2011:32(6):798-826.
28. Bauer AJ, **Dinauer CA**, Waguespack SG, and Francis GL. "Differentiated thyroid cancer in children" in Clinical Management of Thyroid Cancer, ed. Kakudo K and Liu Z, Future Medicine, London, UK, 2013, pp 106-118 (e-book).
29. Rivkees, SA and **Dinauer CA**. "The pediatric thyroid nodule and papillary thyroid cancer management" in Management of Thyroid Nodules and Differentiated Thyroid Cancer, ed. Solorzano C, Sosa JA, and Roman S, Springer Nature, New York, NY, in press.

Invited Editorials and Commentaries

30. Rivkees SA and **Dinauer C**. An optimal treatment for pediatric Graves' disease is radioiodine. *Journal of Clinical Endocrinology and Metabolism.* 2007, 92:797-800.

Practice Guidelines, Standards and Consensus Statements

31. Francis GL, Waguespack SG, Bauer AJ, Angelos P, Benvenga S, Cerutti JM, **Dinauer CA**, Hamilton J, Hay ID, Luster M, Parisi MT, Rachmiel M, Thompson GB, Yamashita S; American Thyroid Association Guidelines Task Force. *Management Guidelines for Children with Thyroid Nodules and Differentiated Thyroid Cancer.* *Thyroid.* 2015: 25(7):716-59.

