

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

ALISHEA KINGDOM, et al.,

Plaintiff,

v.

DONALD J. TRUMP, et al.,

Defendants.

Case No. 1:25-cv-00691

**EXPERT DECLARATION OF OLE-PETTER HAMNVIK, M.B. B.Ch. B.A.O., M.M.Sc.,
IN SUPPORT OF MOTION FOR UPDATED PRELIMINARY INJUNCTION**

I, Ole-Petter Hamnvik, hereby declare and state as follows:

1. I am over the age of 18, of sound mind, and in all respects competent to testify.
2. I have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.
3. I have actual knowledge of the matters stated herein. If called to testify in this matter, I would testify truthfully and based on my expert opinion.
4. This declaration is based on my own clinical, educational and research experience as a board-certified endocrinologist with experience in assessing and providing gender-affirming hormone therapy to people with gender dysphoria, as well as review of the relevant literature. It is also based on my clinical, educational and research experience with a wide range of medical conditions that are treated with the same medications that are used in gender-affirming hormone therapy for the treatment of gender dysphoria.
5. In preparing this declaration, I have reviewed the following case-specific material: the Bureau of Prisons' ("BOP") Program Statement 5260.01, Management of Inmates with Gender Dysphoria (the "Program Statement"); the Memorandum on Program Statement 5260.01, Management of Inmates with Gender Dysphoria (Feb. 19, 2026) (the "Memorandum"); and the expert declaration of Dr. Kristopher Kaliebe dated September 19, 2025 ("Kaliebe Declaration" or "Kaliebe Dec.").

I. BACKGROUND AND QUALIFICATIONS

A. Qualifications

6. I received my medical degree (M.B. B.Ch. B.A.O.) from the Royal College of Surgeons in Ireland (RCSI) in 2005 with First-Class Honors, and my Master of Medical Science (M.M.Sc.) from Harvard Medical School (HMS) in 2014.

7. I completed one year as an intern followed by one year as a Senior House Officer at Beaumont Hospital, Dublin, Ireland.

8. I completed 3 years of Internal Medicine Residency at Brigham and Women's Hospital (BWH) in Boston, MA in 2010, and also spent one additional year as a Chief Medical Resident (overseeing the training of the hospital's internal medicine residents). I remained at BWH for a 3-year Clinical/Research Fellowship in Endocrinology, Diabetes and Metabolism. During this time, I received training in clinical endocrinology as well as in the execution and interpretation of research.

9. I have been Board Certified by the American Board of Internal Medicine in Internal Medicine since 2010, and in Endocrinology, Diabetes and Metabolism since 2012.

10. I have been an Associate Physician in the Division of Endocrinology, Diabetes and Hypertension at BWH since completion of my training in 2014, where I currently see patients in an outpatient endocrinology clinic.

11. My clinical practice spans the full spectrum of adult endocrinology. This includes evaluation and management of patients with hormone excess (e.g., hyperthyroidism, hyperprolactinemia), hormone deficiency (e.g., hypothyroidism, type 1 diabetes), structural problems in endocrine glands (e.g., nodules of the thyroid, adrenal, or pituitary glands), and other conditions that do not fit this framework (polycystic ovary syndrome (PCOS), osteoporosis, gender dysphoria). Many of the conditions that I see are treated with androgens (primarily testosterone) or estrogens, for example estrogen-containing birth control pills in PCOS, testosterone for impaired testicular function in cisgender men, and hormone therapy for menopausal symptoms in cisgender women. Part of my clinical time is spent supervising the endocrinology fellows' clinic at BWH, where the fellows (physicians who are training to become endocrinologists) do a primary evaluation of patients under my supervision and teaching.

12. I have treated patients with gender dysphoria since I started my endocrinology fellowship in 2010. I played a leading role in establishing and expanding the multidisciplinary

Center for Transgender Health at BWH. Gender-affirming hormone therapy is now a significant part of my clinical practice. In the year from Oct 1, 2024, to Sept 30, 2025, I had a total of 692 separate clinic visits with patients with gender dysphoria (representing around half of my clinical volume).

13. I have advised multiple national and international institutions on gender-affirming hormone therapy, including the Oslo Municipal Health Center for Gender and Sexuality in Norway, Northwestern Memorial Hospital in Chicago, and Cambridge Health Alliance in Massachusetts. I served on the Norwegian Directorate for Health and Social Affairs' advisory committee for the development of national guidelines on care for persons with gender incongruence and gender dysphoria.

14. My academic work is primarily in medical education. I am an Associate Professor of Medicine at HMS where I have held faculty appointments since 2012. I am also a Lecturer with the Institute for Medical Engineering and Science at the Massachusetts Institute of Technology (MIT).

15. I direct the Fellowship Program in Endocrinology, Diabetes, and Metabolism at BWH and the Fellowship Program in Transgender Medicine at the same institution. I am also the Director of Education for the Brigham and Women's Center for Transgender Health, and Course Director for the Mass General Brigham Transgender Health Grand Rounds and for the Harvard Medical School course *Sex- and Gender-Informed Medicine: Research, Clinical Practice, and Population Health*.

16. I have authored or co-authored numerous peer-reviewed publications and presented invited lectures on a variety of endocrine topics. These include lectures on "Management of menopausal symptoms" for the Indian Health Service Remote Continuing Medical Education Program and "Diagnosis and management of male hypogonadism" to HCA Healthcare in Nashville, TN, as well as publications on "Management of vasomotor symptoms in cancer patients" published in the journal *The Oncologist* in 2025.

17. I have provided invited grand rounds and continuing medical education lectures on gender-affirming hormone therapy and transgender health at major academic institutions, including at HMS, Duke University, and Cedars-Sinai Medical Center. I have also spoken on this topic nationally and internationally, including at meetings of the World Professional Association

for Transgender Health (WPATH), the United States Professional Association for Transgender Health (USPATH), and the Endocrine Society.

18. I have been a member of the Endocrine Society since 2008. I was previously co-chair of its Transgender Medicine & Research Special Interest Group, and I am currently a member of its Clinical Guidelines Committee.

19. I have been a member of WPATH since 2017 and am currently co-lead of the WPATH Global Education Institute Curriculum Development Committee. I am certified in WPATH's Standards of Care 8 and have served as a mentor for clinicians seeking this certification for themselves.

20. I am also actively involved in research. This includes leading a multi-institutional effort across six leading academic medical centers in the United States to better define the most appropriate dose of injectable estradiol for patients with gender dysphoria, which led to two publications in leading endocrinology journals.

21. My professional background, experience, publications, and presentations are provided in detail in my curriculum vitae ("CV"), a true and correct copy of which is attached hereto as Exhibit A.

B. Compensation

22. I am being compensated for my work on this matter at a rate of \$400/hr, \$500/hr for deposition, and \$2000/half-day for testimony work, plus expenses. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I provide.

C. Previous Testimony

23. Over the past four years, I have given expert testimony by deposition in one case—Keohane v. Dixon (N.D. Fla. No. 4:24-cv-434-AW).

II. SUMMARY OF EXPERT OPINIONS

24. Hormone therapy for the treatment of gender dysphoria is safe, and its risks are comparable to the risks of other well-accepted medical treatments.

25. Most of the risks associated with testosterone, estrogen, and anti-androgens are present regardless of whether these medications are being used to treat transgender people with gender dysphoria or cisgender people for other indications.

26. The risk of more serious adverse effects is very low and often consistent with the risk profiles of cisgender individuals: transgender men receiving testosterone therapy may see increases in some risks and decreases in others as their risk profile aligns more closely with cisgender men, and transgender women receiving estrogen therapy may see increases in some risks and decreases in others as their risk profile aligns more closely with cisgender women.

27. Most medical treatments carry risks, some severe. In medicine, patients and their doctors weigh the potential risks and benefits of a treatment and of foregoing the treatment to decide how to address a condition. This is part of the informed consent process. There is nothing unique about the potential risks of hormone therapy for gender dysphoria that warrants deviating from this approach or prohibiting such care.

28. The Program Statement, by prohibiting and withdrawing hormone therapy from patients receiving such treatment for gender dysphoria, would reverse most—but not all—of the physical changes from hormone therapy. In my experience with patients who had to discontinue hormone therapy because of loss of insurance, they experienced significant distress; in some cases, patients were not even able to function at work. For patients who have had gender-affirming surgeries to remove their testes or ovaries, the loss of hormone therapy would also expose them to the risks of sex hormone deficiency (hypogonadism), which includes bone fragility (osteoporosis), hot flashes, and increased risk of cardiovascular disease.

III. EXPERT OPINIONS

A. Hormone Therapy is Safe and the Risks are Comparable to Other Well-Accepted Medical Treatments.

1. Testosterone

29. Testosterone is a hormone that is primarily produced in the testes, and to a lesser extent the ovaries and the adrenal glands. As with all hormones, it exerts wide-ranging effects, with physiologic roles in both women and men.

30. Testosterone has been available for treatment of low testosterone in cisgender men since the 1930's-1940's (Nieschlag and Nieschlag, 2019). This includes use in conditions such as genetic disorders that lead to reduced testosterone; after medical treatments that damage the testes or the pituitary gland (such as chemotherapy, radiation, or surgery); or tumors that interfere with testosterone production. In addition, there is widespread use of testosterone in

cisgender men with low testosterone due to aging or obesity (Morden et al., 2019), and also increasing use in cisgender women for a variety of indications (Davis, 2025).

31. Testosterone has been regularly used to treat gender dysphoria in adults since the mid-20th century, and was recommended in the very first guidelines from WPATH (then called the Harry Benjamin International Gender Dysphoria Association) (Harry Benjamin International Gender Dysphoria Association, 1979). Its use to treat gender dysphoria is widely accepted in the medical community and is supported by every major medical organization in the United States, including the Endocrine Society, the American Medical Association, and the American College of Physicians (GLAAD, 2024).

32. When used in transgender men with gender dysphoria, the goal of testosterone is to induce physical changes to better align the body with the patient's gender identity. Hair growth on the face and body, deepening of the voice, redistribution of fat and muscle, and growth of the clitoris are some of the desired physical changes from testosterone therapy, in addition to cessation of menstruation.

33. Testosterone is administered to transgender men at similar doses to those used in cisgender men with low testosterone, and the dose is adjusted to achieve blood levels of testosterone that are in the reference range for cisgender men. This is standard-dose testosterone administration to achieve testosterone levels in the male physiologic range.

34. Like most medical treatments, testosterone therapy may carry some risks of adverse effects. The main serious risks that have been linked to therapeutic testosterone use for hypogonadism in cisgender men or for gender dysphoria in transgender men are an increased risk of cardiovascular risk factors and cardiovascular disease (heart attacks and stroke), and erythrocytosis (abnormally high red blood cell count).

35. Some cardiovascular risk factors could be affected by testosterone, including hypertension, dyslipidemia (adverse changes in blood cholesterol levels) and body weight. The most recent systematic review of studies of testosterone treatment of transgender men did not find any significant change in blood pressure, but found expected changes in weight and in cholesterol values (Rahman et al., 2024). An increase in weight is expected but is primarily due to an increase in muscle mass which is not thought to carry any increase in cardiovascular risk (Gois et al., 2025). As to the blood cholesterol levels in transgender men taking testosterone, these were noted to become more similar those of cisgender men, with higher LDL-cholesterol

and triglyceride levels and lower HDL-cholesterol levels. The changes in cholesterol were all modest, and patients are frequently monitored for these changes and appropriate lifestyle advice is provided to help limit cardiovascular risk.

36. Whether changes in cardiovascular risk factors translate into a change in the risk of actual cardiovascular events (heart attack, stroke, blood clots) has been studied. The most informative studies are those that compare cardiovascular risk in transgender men taking testosterone to two separate comparison groups: cisgender women and cisgender men. In these studies, the cardiovascular risk in transgender men taking testosterone is not significantly different from that seen in cisgender men (Getahun et al., 2018; Nota et al., 2019). In other words, the potential increase in cardiovascular risk is to the same risk level that is seen in cisgender men.

37. Thus, Dr. Kaliebe is correct that testosterone may increase risk of hypertension and atherosclerosis and cause a 1.5- to 2-fold increase in cardiovascular events in transgender men (Kaliebe Dec. par. 102) if the comparison group is cisgender women, because testosterone can raise the risk of these health issues to be comparable to the risk profile of cisgender men. But there is no evidence that testosterone therapy puts transgender men at a heightened risk of these adverse health issues compared to other men.

38. Another known risk of testosterone therapy is erythrocytosis, which refers to an increase in the amount of red cells in the blood (often measured using a test called hematocrit), and which can lead to increased blood viscosity, blood clots, and neurological symptoms (headaches, numbness, weakness) in severe cases. Erythrocytosis can be seen whether testosterone is taken by transgender men or cisgender men. Data shows that 0.5% of transgender men treated with testosterone have hematocrit greater than 54% on repeated measures (Madsen et al., 2021). A hematocrit greater than 54% is the threshold level for intervention in guidelines for cisgender men, above which interventions to lower it are recommended (Bhasin et al., 2018). Hematocrit is routinely monitored in anyone receiving testosterone treatment—whether a transgender man or cisgender man—to ensure that any additional contributing factors (e.g., smoking, lung disease) are addressed and testosterone therapy adjusted.

39. Testosterone therapy—whether for transgender or cisgender men—also increases the risk of acne and male pattern baldness, symptoms that are also commonly seen in individuals with high levels of endogenous testosterone. So, again, while these risks increase with taking

testosterone, transgender men receiving such treatment experience the same risk as cisgender men.

40. A risk of testosterone therapy that applies only to transgender men is thinning of the tissues of the genitourinary tract (genitourinary atrophy), primarily manifesting as vaginal dryness. This can be addressed with lubricants, vaginal moisturizers, and vaginal estrogen, the same way it is for post-menopausal women if they experience discomfort from this. Dr. Kaliebe discusses a study looking at pelvic floor dysfunction, including urinary incontinence, bowel dysfunction, sexual dysfunction and pelvic pain (Kaliebe Dec, par. 105). However, the study's methodology does not allow any causal inference to be made about testosterone's role in producing these symptoms. The study relied on an online survey distributed via social media, with 68 respondents. This study design is prone to significant selection bias when studying adverse effects of a medication and cannot be used to draw conclusions about the prevalence of adverse effects in the broader population of individuals taking the medication. Individuals experiencing symptoms are substantially more likely to self-select into survey participation than asymptomatic individuals, meaning the study is not one that can reliably estimate the prevalence of this condition in the population, and almost certainly overrepresents the prevalence of pelvic floor dysfunction (Andrade, 2020). Finally, the study cannot establish causation since there was no baseline assessment of symptoms prior to testosterone initiation, making it impossible to attribute any reported symptoms.

The causal link is further weakened by evidence that pelvic floor symptoms are prevalent in transgender men regardless of testosterone use (Abern et al., 2022).

In clinical practice, the most commonly encountered pelvic symptoms in transgender men are those due to genitourinary atrophy which are similar to those seen in postmenopausal women, such as vaginal dryness, painful intercourse and urinary changes. These typically resolve with topical estrogen or other local therapies for vaginal dryness.

41. Testosterone use in transgender men can potentially—but not necessarily—negatively impact fertility. Most patients taking testosterone will see cessation of menstrual periods, which in many cases is a marker that ovulation is no longer occurring. This means that the likelihood of getting pregnant while taking testosterone is lower. Since testosterone can cause birth defects if taken during pregnancy, and since some patients will still ovulate while taking testosterone, clinicians will still recommend use of other forms of contraception if patients are

engaging in sexual activities that put them at risk of pregnancy. However, should the patient wish to pursue fertility after taking testosterone, there are reassuring data suggesting that this may still be possible. This will typically involve discontinuing testosterone, after which menstrual periods resume within 3-6 months (Leung et al., 2019). This is also consistent with what is seen in cisgender women who stop taking birth control pills (Davis et al., 2008). Both testosterone and estrogen-containing birth control pills control periods in a similar way, by shutting down the body's own hormone production due to taking hormones as a medication, so it is not surprising that recovery of normal cycles is similar. Several studies have shown that pregnancy can be achieved, or that artificial reproduction technologies can be successfully used, after discontinuation of testosterone (Kinnear and Moravek, 2023). While larger and longer studies are needed, the data currently available show that there are transgender men having restoration of fertility after discontinuing testosterone therapy.

42. The potential impact of testosterone on fertility—including options for fertility preservation—is discussed with patients prior to starting hormone therapy and as part of the informed consent process. As with other medical treatments that can impair fertility, such as certain medications used in the treatment of lupus, or chemotherapy used in the treatment of cancer, the patient and prescriber weigh this risk against the potential benefits of treatment.

43. Dr. Kaliebe's comparison of testosterone therapy to the high levels of androgens from anabolic steroid use and certain tumors that produce androgens—which can cause psychiatric effects such as aggression and mania—is inappropriate (Kaliebe Dec. par. 99). The doses of androgens (testosterone-like hormones) used by those who abuse anabolic steroids are not comparable to the doses of testosterone used in gender-affirming testosterone therapy (or testosterone therapy for the other conditions mentioned above). In the study cited by Dr. Kaliebe to support his claim about the psychiatric effects of testosterone, the participants were taking anabolic steroids at doses ranging from 300 mg to >1000 mg per week (Hall et al., 2005). For comparison, typical doses of testosterone for transgender men are 50-100 mg per week (Hembree et al., 2017), and as discussed above, the dose is adjusted to achieve testosterone levels in the range seen in cisgender men.

44. Dr. Kaliebe misleadingly references results from the Food and Drug Administration's (FDA's) Adverse Event Reporting System (FAERS) (Gomez-Lumbreras and Villa-Zapata, 2024) to support his contention that there are "substantial health risks" from cross-

sex hormone therapy for transgender men (and transgender women) (Kaliebe Dec. pars. 97, 98). He does this by noting that among reports of adverse drug events from transgender men (a total of 82), a high percentage involved hormone therapy and were categorized as serious. However, there are substantial limitations to the FAERS data that are neither subtle nor obscure, and should be apparent to any clinician engaging with this literature (Chedid et al., 2017; Food and Drug Administration, 2025). Data from pharmacovigilance databases such as FAERS do not tell you whether hormone therapy is the actual cause of the reported adverse effects or provide any information about the prevalence of adverse effects from hormone therapy. FAERS is a passive system that logs reports from the public about adverse drug reactions. Anyone can make a report if they believe a drug was responsible for a symptom they experienced. There is no assurance that the reported event was in fact due to the drug. Furthermore, clinicians are more likely to report adverse effects that they expect to see, leading to potential bias in the reporting. Moreover, because the number of total individuals taking the drugs in question is not provided, these databases cannot be used to calculate risk. None of the percentages quoted by Dr. Kaliebe (e.g., 88% serious adverse events, 10.9% risk of neoplasm) refer to the risk of that adverse effect; instead, they refer simply to the percentage of the 82 reports that included that specific side effect. Using a conservative estimate of 500,000 transgender patients taking testosterone in the United States, a mere 82 reports to FAERS cannot be used to support a claim that these medications pose a substantial health risk.

2. Estrogen

45. Estrogen refers to a category of sex hormones that is primarily produced in the ovaries in cisgender women. In men and women, estradiol is also produced through a process called aromatization, where testosterone is converted to estrogen. The main form of estrogen in humans is called estradiol. Estrogen exerts wide-ranging effects, with physiologic roles in both women and men.

46. Estrogens have been used pharmacologically since the 1930's-1940's (Santen and Simpson, 2019). Currently, there are many types of estrogens that are in use pharmacologically. The most commonly prescribed estrogen is ethinyl estradiol, which is the form of estrogen that is present in most types of birth control tablets. Another estrogen-containing drug is conjugated equine estrogens, which is primarily used to treat symptoms of menopause. A third form of

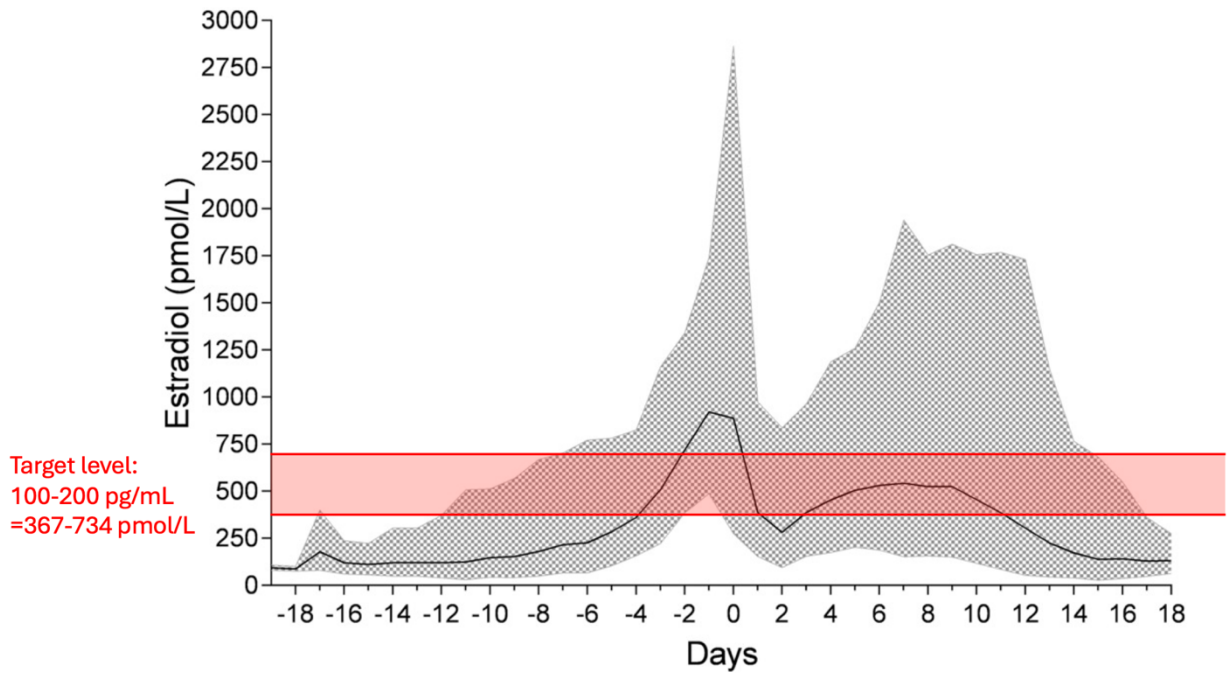
estrogen is estradiol, which is FDA-approved primarily for treatment of menopausal symptoms and for treating low estrogen from other causes (such as after medical treatments that damage the ovaries or in autoimmune conditions that destroy the ovaries) (DailyMed, 2024).

47. Similar to testosterone, estrogens have been used in adults with gender dysphoria since the middle of the 20th century and were also recommended in the very first standards of care from WPATH (Harry Benjamin International Gender Dysphoria Association, 1979). In transgender care, the estrogen that is prescribed is typically estradiol (which is identical to the predominant form of estrogen in humans). This form is recommended because of data showing that it has a lower risk of venous thromboembolism than the estrogen in birth control pills (Goldstein et al., 2019), and because estradiol levels can be readily measured with a blood test.

48. The use of estrogen to treat gender dysphoria is widely accepted in the medical community and supported by every major medical organization in the United States, including the Endocrine Society, the American Medical Association, and American College of Physicians (GLAAD, 2024).

49. When used in transgender women, the goal of estradiol is to induce physical changes to better align the body with the patient's gender identity. Growth of breast tissue, softening of the skin, and changes in fat deposition and muscle development are some of the desired female secondary sex characteristics.

50. In transgender women, the estradiol is dosed to bring the blood level of estradiol into the normal range for cisgender women to induce the desired physical changes and to suppress testosterone levels. Estradiol levels vary greatly in cisgender women throughout the menstrual cycle; the target range for estradiol levels in transgender women (100-200 pg/mL in US units, or 367-734 pmol/L in international units) is set to be around the mean estradiol level in premenopausal cisgender women. This is illustrated in the figure showing the daily mean estradiol concentration (black line) and reference interval (95% range, grey area) in 30 premenopausal women throughout one menstrual cycle, with the red shaded area showing the target range for estradiol in transgender women taking estradiol (Verdonk et al., 2019).



51. Like most medical treatments, estrogen therapy carries some risks of adverse health impacts. Estrogen treatment is associated with an increased risk of blood clots (venous thromboembolism), including blood clots to the lungs (pulmonary embolism), high blood pressure, and elevated triglycerides. These risks exist whether this medication is used to treat gender dysphoria in transgender women or to treat cisgender women with other conditions mentioned above. These risks are all low and can be managed by appropriate estradiol dosing with monitoring of blood levels and other relevant labs, and other interventions as needed.

52. Studies have shown that the risk of venous thromboembolism is increased approximately 2-fold in transgender women taking estradiol compared to people not taking estradiol (van Zijverden et al., 2024). While the risk is doubled, it remains very low - the risk has been estimated to be 2.3 cases of venous thromboembolism per year for every 1000 patients receiving estradiol (Khan et al., 2019). Secondly, the increased risk is lower than the risk of venous thromboembolism seen with cisgender women taking estrogen via oral birth control pill, where the risk is increased 3.8-fold (with variation depending on the exact type of birth control pill studied and patient risk factors), and similar to the 2.1-fold increased risk seen in cisgender women taking estrogen and progesterone as part of menopausal hormone therapy (Mullins and Mullins, 2024).

53. The effect of estradiol treatment on cardiovascular disease and risk factors in transgender women has been extensively studied, given that it is known that these risks exist for cisgender women treated with estrogen. Reassuringly, a recent systematic review of studies of transgender women taking estrogen did not find any significant changes in cardiovascular risk factors with the only significant finding being a small increase in triglyceride levels (Rahman et al., 2024) – just as seen in cisgender women receiving estrogen treatment (Godsland et al., 1990).

54. In most of the studies that have compared the risk of cardiovascular events in transgender women taking estrogen with the risk in cisgender women as well as with the risk in cisgender men, the cardiovascular risk is not significantly different from that seen in cisgender men (Alzahrani et al., 2019; Getahun et al., 2018; Nota et al., 2019). In other words, treatment with estradiol in transgender women does not seem to change the patients’ cardiovascular risk; it remains at the cisgender male level. Dr. Kaliebe says that “limited data suggests a slight increase in stroke risk,” for transgender women receiving estrogen treatment compared to cisgender men (Kaliebe Dec. par. 101). Presumably he is referring to Nota et al., 2019. He appropriately acknowledges that the “evidence is less conclusive” and in fact, this finding was not seen in another study (Getahun et al., 2018). In any case, patients are monitored for changes in cardiovascular risk factors and appropriate lifestyle advice is provided to help limit cardiovascular risk.

55. Dr. Kaliebe says that changes to the testes from estrogen therapy in transgender women may lead to an elevated risk of cancer (Kaliebe Dec. par. 109). This statement is not supported by current research. The changes in testicular microscopic findings represent the expected findings of testicular atrophy, but it does not lead to an increased risk of testicular cancer risk. One systematic review was only able to identify a single case of testicular cancer in the literature to date (Joint et al., 2018).

56. While Dr. Kaliebe does not mention a risk of breast cancer, BOP’s Memorandum, in asserting that hormone therapy for gender dysphoria can cause substantial health risks, cites a study (Gurralla et al., 2023) that it describes as finding that “males who are treated with estrogen have twenty-two times the likelihood to develop breast cancer” (Memorandum at 22). In fact, the cited study did not show this – it was a study of the effect of *testosterone* treatment on breast cancer risk in *transgender men*, and did not include anyone treated with estrogen. This particular study found that the risk of breast cancer in transgender men treated with testosterone was only

about one-fifth of the breast cancer risk in cisgender women. It is true, however, that other studies have shown that breast cancer risk in transgender women taking estradiol is higher than the breast cancer risk in cisgender men. For example, the biggest study (de Blok et al., 2019) found that the risk of breast cancer was higher in transgender women who had received estrogen when compared to *cisgender men*. It is, however, important to note that the risk was only about one-third of that seen in *cisgender women*, and the actual risk was quite low (15 cases of breast cancer among 2260 transgender women). Even though transgender women taking estrogen are at lower risk than cisgender women, the recommendation for managing the breast cancer risk is similar to that for cisgender women, with breast cancer screening based on age and other risk factors (Brown et al., 2021).

57. Dr. Kaliebe asserts that there are potential cognitive risks, including memory loss and early-onset cognitive impairment, from estrogen therapy (Kaliebe Dec. par. 110). The paper cited (Schwartz et al., 2025) quotes the FDA label for estradiol which listed dementia as a potential risk (regardless of what indication it is used for). However, it is now recognized that there is no such risk from estrogen treatment, as shown in a recent meta-analysis (Melville et al., 2025). This recently led the FDA to remove this warning from its label (Food and Drug Administration, 2026). The other data quoted by Schwartz et al. show lower cognitive functioning in transgender women on estrogen compared to cisgender groups (van Heesewijk et al., 2025). However, the authors highlight that this difference can be largely explained by increased rates of mental health problems and adverse social circumstances.

58. Estrogen therapy can negatively impact fertility when used in transgender women. During estrogen treatment, there is a reduction in the number and quality of sperm cells in the semen; there is reduced semen volume; and there are a variety of microscopic changes in the testes indicating reduced sperm cell production (Rodriguez-Wallberg and Pfau, 2025). Sperm production may recover after interruption of estrogen therapy even after many years of estrogen treatment, although larger studies are needed to confirm this (Nie et al., 2023). The potential impact of estrogen on fertility—including options for fertility preservation—is discussed at length with patients prior to starting hormone therapy and as part of the informed consent process. As with other medical treatments that can impair fertility, the patient and doctor weigh this risk against the potential benefits of treatment.

59. Estrogen therapy can potentially affect sexual function in transgender women. Reduced interest in sex can be seen, but studies have shown this effect to be transient (Defreyne et al., 2020). Reduction in frequency of erections is common and may be persistent (Yaish et al., 2025). If this is a cause of concern, it can be treated with the same medications that are used in cisgender men who experience erectile dysfunction (e.g., Viagra, Cialis). Again, this is something that is discussed during the informed consent process. Of note, for many patients, a decrease in libido and spontaneous erections is a desired effect from hormones (Sandhu et al., 2024).

3. Antiandrogens

60. Antiandrogens are medications that are used in conjunction with estradiol in transgender women. While estradiol will suppress testosterone levels, it will typically not bring testosterone levels into the female range on its own. A second medication, often called an antiandrogen, is therefore often added to further suppress testosterone levels. The main antiandrogens used are spironolactone and GnRH agonists (leuprolide is the most commonly used medication in this class of medications).

61. Spironolactone is an antihypertensive that was approved by the FDA in 1960 and is used for a variety of medical conditions such as hypertension, heart failure, cirrhosis, polycystic ovarian syndrome (to reduce body and facial hair growth) and acne (DailyMed, 2025a). Leuprolide was approved in 1985, and is used for a variety of hormone-responsive conditions such as prostate cancer, breast cancer, endometriosis, and precocious puberty (DailyMed, 2025b).

62. These antiandrogens have been used as part of gender-affirming hormone therapy for transgender women since the 1980's.

63. These medications carry risks of certain adverse effects. The risks of spironolactone include a reduction in kidney function, abnormal electrolytes, low blood pressure, frequent urination, and dehydration. These risks exist whether the medication is used to treat transgender women with gender dysphoria or cisgender people with other conditions. However, severe side effects affecting kidney function or electrolytes are rare in transgender people, occurring in 2-2.5% of patients (Hayes et al., 2022). This is less frequent than the rate of these side effects in patients taking spironolactone for other conditions such as heart failure and

cirrhosis (Böhm et al., 2026), presumably because transgender patients often do not have co-existing medical conditions that further predispose them to these side effects, and therefore have intact other mechanisms to ensure maintained renal function and electrolytes.

64. The primary risks of GnRH agonists are due to the decrease in sex hormone levels, and include hot flashes and osteoporosis. These side effects are not typically seen when used to treat gender dysphoria since sex hormones are part of treatment, countering that risk.

* * *

65. In sum, most of the risks associated with testosterone, estrogen, and anti-androgens are present regardless of whether these medications are being used to treat transgender people with gender dysphoria or cisgender people with other conditions. The risk of serious adverse effects is low and often consistent with the risk profiles of cisgender individuals: transgender men receiving testosterone therapy may see increases in some risks and decreases in others as their risk profile aligns more closely with cisgender men, and transgender women receiving estrogen therapy may see increases in some risks and decreases in others as their risk profile aligns more closely with cisgender women.

66. Managing risks associated with medical treatments are common in medical practice. Many widely-used medical treatments have risks that are comparable or far more significant than medical treatments used for gender dysphoria. Like all medical treatments, the risks are evaluated for each individual patient and discussed as part of the informed consent process. The risks of hormone therapy for the treatment of gender dysphoria are the types of risks that doctors and patients routinely weigh in making treatment decisions. There is nothing about the risks of hormone therapy for gender dysphoria that warrants prohibiting the care.

B. The Impact of the Program Statement

67. The Program Statement prohibits the initiation of hormone therapy for individuals with gender dysphoria and mandates the withdrawal of this treatment for patients currently receiving it, providing for a tapering process depending on how long the patient has been receiving hormone therapy.

68. If the Program Statement is implemented and patients are withdrawn from hormone therapy, it will reverse most—but not all—of the physical changes that have occurred as a result of the treatment.

69. For transgender women, discontinuing hormone therapy will cause a resumption of facial and body hair growth, a redistribution of fat and muscle to a more typically male shape, and a coarsening of the skin. The one change that will not be affected by withdrawing care is breast development. These patients will experience a masculinization of their face and body but will retain their breasts.

70. For transgender men, discontinuing hormone therapy will cause a resumption of the menstrual period and a redistribution of fat and muscle to a more typically female shape. The deepened voice caused by testosterone therapy will remain, any changes in facial bone structure and prominence of the Adam's apple will remain, and facial and body hair will remain (although may grow slower and slightly thinner).

71. In my experience with patients who had to discontinue hormone therapy because of loss of insurance, they experienced significant distress as their bodies began to misalign with their gender identity; in some cases, this caused severe functional impairment where patients were no longer able to function at work.

72. For patients who have had gender-affirming surgeries to remove their testes or ovaries, apart from the psychological risks of discontinuing treatment, the loss of hormone therapy would leave them with no sex hormones (hypogonadism). The risks of hypogonadism are severe, and include hot flashes and night sweats that can severely impact quality of life (Blümel et al., 2026). Loss of sex hormones also leads to rapid loss of bone strength, causing osteoporosis which puts the patient at high risk of fractures. It is known that osteoporotic fractures of large bones such as the hip comes with a substantial risk of loss of function and excess mortality (LeBoff et al., 2022).

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this 26th day of April, 2026



Ole-Petter Hamnvik

Bibliography

- Abern, L., Maguire, K., Cook, J., Carugno, J., 2022. Prevalence of Vulvar Pain and Dyspareunia in Trans Masculine Individuals. *LGBT Health* 9, 194–198. <https://doi.org/10.1089/lgbt.2020.0357>
- Alzahrani, T., Nguyen, T., Ryan, A., Dwairy, A., McCaffrey, J., Yunus, R., Forgione, J., Krepp, J., Nagy, C., Mazhari, R., Reiner, J., 2019. Cardiovascular Disease Risk Factors and Myocardial Infarction in the Transgender Population. *Circ. Cardiovasc. Qual. Outcomes* 12, e005597. <https://doi.org/10.1161/CIRCOUTCOMES.119.005597>
- Andrade, C., 2020. The Limitations of Online Surveys. *Indian J. Psychol. Med.* 42, 575–576. <https://doi.org/10.1177/0253717620957496>
- Bhasin, S., Brito, J.P., Cunningham, G.R., Hayes, F.J., Hodis, H.N., Matsumoto, A.M., Snyder, P.J., Swerdloff, R.S., Wu, F.C., Yialamas, M.A., 2018. Testosterone Therapy in Men With Hypogonadism: An Endocrine Society Clinical Practice Guideline. *J. Clin. Endocrinol. Metab.* 103, 1715–1744. <https://doi.org/10.1210/jc.2018-00229>
- Blümel, J.E., Vallejo, M.S., Chedraui, P., Arteaga, E., Ayala, F., Bencosme, A., Calle, A., Costa-Paiva, L., Dextre, M., Díaz, K., Elizalde-Cremonte, A., Elizalde-Cremonte, S., Escalante, C., Espinoza, M.T., García, I., Gómez-Tabares, G., Gutiérrez-Crespo, H., López, M., Matsumura-Kasana, J., Meza, P., Monterrosa-Castro, Á., Ñañez, M., Ojeda, E., Rey, C., Valadares, A.L.R., Rodríguez-Vidal, D., Rodrigues, M.A., Saavedra, J., Salinas, C., Sosa, L., Tserotas, K., Acuña-San Martín, M., Aguirre, M.S., 2026. Hot flashes: a potential marker of deterioration of health-related quality of life. *Climacteric J. Int. Menopause Soc.* 1–8. <https://doi.org/10.1080/13697137.2026.2627561>
- Böhm, M., Abdullakutty, J., Bauersachs, J., Bavendiek, U., Bayes-Genis, A., Bhattacharyya, K., Biegus, J., Bozkurt, B., Butler, J., Ezhilan, J., Ferreira, J.P., Girerd, N., Gupta, R., Hiremath, J., Jhund, P., Kessler, T., Kumar, D., Markwirth, P., Marx, N., McDonagh, T., Navsundi, G., Pande, A., Petrie, M., Ponikowski, P., Rakisheva, A., Rosano, G., Sato, N., Savarese, G., Sharma, K., Sliwa, K., Somaraju, B., Sossalla, S., Störk, S., Tokcan, M., Tsioufis, K., Zhang, Y., Zhang, J., Zieroth, S., Zannad, F., 2026. European Journal of Heart Failure International Expert Position Paper Utilisation, Optimisation, and Clinical Benefits of Steroidal Mineralocorticoid Receptor Antagonists in Heart Failure with a Reduced Ejection Fraction. *Eur. J. Heart Fail.* xuag106. <https://doi.org/10.1093/ehf/xuag106>
- Brown, A., Lourenco, A.P., Niell, B.L., Cronin, B., Dibble, E.H., DiNome, M.L., Goel, M.S., Hansen, J., Heller, S.L., Jochelson, M.S., Karrington, B., Klein, K.A., Mehta, T.S., Newell, M.S., Schechter, L., Stuckey, A.R., Swain, M.E., Tseng, J., Tuscano, D.S., Moy, L., 2021. ACR Appropriateness Criteria® Transgender Breast Cancer Screening. *J. Am. Coll. Radiol.* 18, S502–S515. <https://doi.org/10.1016/j.jacr.2021.09.005>
- Chedid, V., Vijayvargiya, P., Camilleri, M., 2017. Advantages and Limitations of the Federal Adverse Events Reporting System in Assessing Adverse Event Reporting for Eluxadoline. *Clin. Gastroenterol. Hepatol.* 16, 336–338. <https://doi.org/10.1016/j.cgh.2017.11.025>
- DailyMed, 2025a. Label: Spironolactone tablet [WWW Document]. URL <https://dailymed.nlm.nih.gov/dailymed/fda/fdaDrugXsl.cfm?setid=e61269b2-823a-49e8-b55f-ef0b8b1dbcde&type=display> (accessed 4.26.26).
- DailyMed, 2025b. Label: Lupron [WWW Document]. URL <https://dailymed.nlm.nih.gov/dailymed/fda/fdaDrugXsl.cfm?setid=60aad237-e1da-4705-cbbb-b3ca79e89ad8&type=display> (accessed 4.26.26).

- DailyMed, 2024. Label: Estradiol tablet [WWW Document]. Label Estrad. Tablet. URL <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=1c2cd11a-e010-20b2-e063-6294a90a52d5> (accessed 4.19.26).
- Davis, A.R., Kroll, R., Soltes, B., Zhang, N., Grubb, G.S., Constantine, G.D., 2008. Occurrence of menses or pregnancy after cessation of a continuous oral contraceptive. *Fertil. Steril.* 89, 1059–1063. <https://doi.org/10.1016/j.fertnstert.2007.05.012>
- Davis, S.R., 2025. Not just sex: other roles for testosterone in women. *Climacteric J. Int. Menopause Soc.* 28, 373–376. <https://doi.org/10.1080/13697137.2024.2445301>
- de Blok, C.J.M., Wiepjes, C.M., Nota, N.M., van Engelen, K., Adank, M.A., Dreijerink, K.M.A., Barbé, E., Konings, I.R.H.M., den Heijer, M., 2019. Breast cancer risk in transgender people receiving hormone treatment: nationwide cohort study in the Netherlands. *BMJ* 365, 11652. <https://doi.org/10.1136/bmj.11652>
- Defreyne, J., Elaut, E., Kreukels, B., Fisher, A.D., Castellini, G., Staphorsius, A., Den Heijer, M., Heylens, G., T'Sjoen, G., 2020. Sexual Desire Changes in Transgender Individuals Upon Initiation of Hormone Treatment: Results From the Longitudinal European Network for the Investigation of Gender Incongruence. *J. Sex. Med.* 17, 812–825. <https://doi.org/10.1016/j.jsxm.2019.12.020>
- Food and Drug Administration, 2026. FDA Approves Labeling Changes to Menopausal Hormone Therapy Products [WWW Document]. FDA. URL <https://www.fda.gov/news-events/press-announcements/fda-approves-labeling-changes-menopausal-hormone-therapy-products> (accessed 4.24.26).
- Food and Drug Administration, 2025. FDA Adverse Event Reporting System (FAERS) Public Dashboard, Frequently Asked Questions [WWW Document]. FDA Adverse Event Report. Syst. FAERS Public Dashboard Freq. Asked Quest. URL <https://fis.fda.gov/extensions/FPD-FAQ/FPD-FAQ.html> (accessed 4.19.26).
- Getahun, D., Nash, R., Flanders, W.D., Baird, T.C., Becerra-Culqui, T.A., Cromwell, L., Hunkeler, E., Lash, T.L., Millman, A., Quinn, V.P., Robinson, B., Roblin, D., Silverberg, M.J., Safer, J., Slovis, J., Tangpricha, V., Goodman, M., 2018. Cross-sex Hormones and Acute Cardiovascular Events in Transgender Persons: A Cohort Study. *Ann. Intern. Med.* 169, 205–213. <https://doi.org/10.7326/M17-2785>
- GLAAD, 2024. Medical Association Statements in Support of Health Care for Transgender People and Youth | GLAAD [WWW Document]. URL <https://glaad.org/medical-association-statements-supporting-trans-youth-healthcare-and-against-discriminatory/> (accessed 4.26.26).
- Godsland, I.F., Crook, D., Simpson, R., Proudler, T., Felton, C., Lees, B., Anyaoku, V., Devenport, M., Wynn, V., 1990. The effects of different formulations of oral contraceptive agents on lipid and carbohydrate metabolism. *N. Engl. J. Med.* 323, 1375–1381. <https://doi.org/10.1056/NEJM199011153232003>
- Gois, Í., Rodrigues, F.B., Pereira, M., Dias-da-Silva, M.R., Gomes, S.M., 2025. Body mass index and body composition changes in transgender people undergoing gender-affirming hormone therapy: a systematic review and meta-analysis. *Rev. Endocr. Metab. Disord.* 26, 937–953. <https://doi.org/10.1007/s11154-025-09985-2>
- Goldstein, Z., Khan, M., Reisman, T., Safer, J.D., 2019. Managing the risk of venous thromboembolism in transgender adults undergoing hormone therapy. *J. Blood Med.* 10, 209–216. <https://doi.org/10.2147/JBM.S166780>
- Gomez-Lumbreras, A., Villa-Zapata, L., 2024. Exploring Safety in Gender-Affirming Hormonal Treatments: An Observational Study on Adverse Drug Events Using the Food and Drug

- Administration Adverse Event Reporting System Database. *Ann. Pharmacother.* 58, 1089–1098. <https://doi.org/10.1177/10600280241231612>
- Gurralla, R.R., Kumar, T., Yoo, A., Mundinger, G.S., Womac, D.J., Lau, F.H., 2023. The Impact of Exogenous Testosterone on Breast Cancer Risk in Transmasculine Individuals. *Ann. Plast. Surg.* 90, 96–105. <https://doi.org/10.1097/SAP.0000000000003321>
- Hall, Ryan C W, Hall, Richard C W, Chapman, M.J., 2005. Psychiatric complications of anabolic steroid abuse. *Psychosomatics* 46, 285–290. <https://doi.org/10.1176/appi.psy.46.4.285>
- Harry Benjamin International Gender Dysphoria Association, 1979. Standards Of Care, The hormonal and surgical sex reassignment of gender dysphoric persons [WWW Document]. URL <https://research.cristanwilliams.com/2012/02/21/hbidga-wpath-soc-i/> (accessed 4.19.26).
- Hayes, H., Russell, R., Haugen, A., Nagavally, S., Sarvaideo, J., 2022. The Utility of Monitoring Potassium in Transgender, Gender Diverse, and Nonbinary Individuals on Spironolactone. *J. Endocr. Soc.* 6, bvac133. <https://doi.org/10.1210/jendso/bvac133>
- Hembree, W.C., Cohen-Kettenis, P.T., Gooren, L., Hannema, S.E., Meyer, W.J., Murad, M.H., Rosenthal, S.M., Safer, J.D., Tangpricha, V., T’Sjoen, G.G., 2017. Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. *J. Clin. Endocrinol. Metab.* 102, 3869–3903. <https://doi.org/10.1210/jc.2017-01658>
- Joint, R., Chen, Z.E., Cameron, S., 2018. Breast and reproductive cancers in the transgender population: a systematic review. *BJOG Int. J. Obstet. Gynaecol.* 125, 1505–1512. <https://doi.org/10.1111/1471-0528.15258>
- Khan, J., Schmidt, R.L., Spittal, M.J., Goldstein, Z., Smock, K.J., Greene, D.N., 2019. Venous Thrombotic Risk in Transgender Women Undergoing Estrogen Therapy: A Systematic Review and Metaanalysis. *Clin. Chem.* 65, 57–66. <https://doi.org/10.1373/clinchem.2018.288316>
- Kinnear, H.M., Moravek, M.B., 2023. Reproductive capacity after gender-affirming testosterone therapy. *Hum. Reprod. Oxf. Engl.* 38, 1872–1880. <https://doi.org/10.1093/humrep/dead158>
- LeBoff, M.S., Greenspan, S.L., Insogna, K.L., Lewiecki, E.M., Saag, K.G., Singer, A.J., Siris, E.S., 2022. The clinician’s guide to prevention and treatment of osteoporosis. *Osteoporos. Int.* 33, 2049–2102. <https://doi.org/10.1007/s00198-021-05900-y>
- Leung, A., Sakkas, D., Pang, S., Thornton, K., Resetkova, N., 2019. Assisted reproductive technology outcomes in female-to-male transgender patients compared with cisgender patients: a new frontier in reproductive medicine. *Fertil. Steril.* 112, 858–865. <https://doi.org/10.1016/j.fertnstert.2019.07.014>
- Madsen, M.C., van Dijk, D., Wiepjes, C.M., Conemans, E.B., Thijs, A., den Heijer, M., 2021. Erythrocytosis in a Large Cohort of Trans Men Using Testosterone: A Long-Term Follow-Up Study on Prevalence, Determinants, and Exposure Years. *J. Clin. Endocrinol. Metab.* 106, 1710–1717. <https://doi.org/10.1210/clinem/dgab089>
- Melville, M., He, L., Desai, R., Nyamayaro, P., Fox, C., Kothari, K.U., Condrón, P., Miao, M., Hickey, M., Spector, A., 2025. Menopause hormone therapy and risk of mild cognitive impairment or dementia: a systematic review and meta-analysis. *Lancet Healthy Longev.* 6, 100803. <https://doi.org/10.1016/j.lanhl.2025.100803>
- Morden, N.E., Woloshin, S., Brooks, C.G., Schwartz, L.M., 2019. Trends in Testosterone Prescribing for Age-related Hypogonadism in Men With and Without Heart Disease. *JAMA Intern. Med.* 179, 446–448. <https://doi.org/10.1001/jamainternmed.2018.6505>
- Mullins, T.L.K., Mullins, E.S., 2024. Thrombotic risk associated with gender-affirming hormone therapy. *J. Thromb. Haemost.* 22, 2129–2139. <https://doi.org/10.1016/j.jth.2024.05.015>

- Nie, I. de, Mello, N.M. van, Vlahakis, E., Cooper, C., Peri, A., Heijer, M. den, Meißner, A., Huirne, J., Pang, K.C., 2023. Successful restoration of spermatogenesis following gender-affirming hormone therapy in transgender women. *Cell Rep. Med.* 4. <https://doi.org/10.1016/j.xcrm.2022.100858>
- Nieschlag, E., Nieschlag, S., 2019. ENDOCRINE HISTORY: The history of discovery, synthesis and development of testosterone for clinical use. *Eur. J. Endocrinol.* 180, R201–R212. <https://doi.org/10.1530/EJE-19-0071>
- Nota, N.M., Wiepjes, C.M., de Blok, C.J.M., Gooren, L.J.G., Kreukels, B.P.C., den Heijer, M., 2019. Occurrence of Acute Cardiovascular Events in Transgender Individuals Receiving Hormone Therapy. *Circulation* 139, 1461–1462. <https://doi.org/10.1161/CIRCULATIONAHA.118.038584>
- Rahman, S.U., Manasrah, N., Kumar, N., Hamza, M., Sharma, A., Patel, N., Patel, B., Naseem, M., Razzaq, S., Gill, S.I., Naveed, H., Harmouch, K.M., Bahar, Y., Aamir, M., Sattar, Y., Alraies, M.C., 2024. Impact of Gender-Affirming Hormonal Therapy on Cardiovascular Risk Factors in Transgender Health: An Updated Meta-Analysis. *JACC Adv.* 3, 101265. <https://doi.org/10.1016/j.jacadv.2024.101265>
- Rodriguez-Wallberg, K.A., Pfau, D.R., 2025. REPRODUCTIVE HEALTH IN TRANS AND GENDER DIVERSE PATIENTS: Effects of feminizing gender-affirming hormone therapy on testicular function and reproductive capacity: review of data from clinical and experimental studies. *Reproduction* 169, e240046. <https://doi.org/10.1530/REP-24-0046>
- Sandhu, S., Dadashian, E., Mallavarapu, S., Smith, S., Garcia, M., 2024. Erection Function And Bother In Transgender Women Taking Gender Affirming Hormone Therapy And After Pre-Vaginoplasty Bilateral Orchiectomy. *J. Sex. Med.* 21.
- Santen, R.J., Simpson, E., 2019. History of Estrogen: Its Purification, Structure, Synthesis, Biologic Actions, and Clinical Implications. *Endocrinology* 160, 605–625. <https://doi.org/10.1210/en.2018-00529>
- Schwartz, L., Lal, M., Cohn, J., Mendoza, C.D., MacMillan, L., 2025. Emerging and accumulating safety signals for the use of estrogen among transgender women. *Discov. Ment. Health* 5, 88. <https://doi.org/10.1007/s44192-025-00216-3>
- van Heesewijk, J.O., Dreijerink, K.M.A., Wiepjes, C.M., Kok, A.A.L., Geurtsen, G.J., van Schoor, N.M., Huisman, M., den Heijer, M., Kreukels, B.P.C., 2025. Cognitive functioning in older transgender individuals receiving long-term gender-affirming hormone therapy. *Int. J. Transgender Health* 26, 88–104. <https://doi.org/10.1080/26895269.2023.2289069>
- van Zijverden, L.M., Wiepjes, C.M., van Diemen, J.J.K., Thijs, A., den Heijer, M., 2024. Cardiovascular disease in transgender people: a systematic review and meta-analysis. *Eur. J. Endocrinol.* 190, S13–S24. <https://doi.org/10.1093/ejendo/lvad170>
- Verdonk, S.J.E., Vesper, H.W., Martens, F., Sluss, P.M., Hillebrand, J.J., Heijboer, A.C., 2019. Estradiol reference intervals in women during the menstrual cycle, postmenopausal women and men using an LC-MS/MS method. *Clin. Chim. Acta* 495, 198–204. <https://doi.org/10.1016/j.cca.2019.04.062>
- Yaish, I., Amir, H., Eilam, H., Gold, R., Groutz, A., 2025. Effects of gender-affirming hormone therapy on lower urinary tract symptoms and sexual function among transgender individuals. *Int. J. Gynaecol. Obstet.* 168, 1292–1297. <https://doi.org/10.1002/ijgo.15964>

Hamnvik Declaration

Exhibit A

**Harvard Medical School
Curriculum Vitae**

Date Prepared: April 19, 2026

Name: Ole-Petter Riksfjord Hamnvik

Office Address: Division of Endocrinology, Diabetes, and Hypertension
Brigham and Women's Hospital
221 Longwood Avenue, RFB-2
Boston, MA 02115

Education:

2005	M.B., B.Ch., B.A.O. (1 st class honors)	Medicine	Royal College of Surgeons in Ireland (RCSI), Dublin, Ireland
2014	M.M.Sc.	Clinical and Translational Investigation	Harvard Medical School (HMS), Boston, MA

Postdoctoral Training:

07/05–06/07	Resident	Internal Medicine	Beaumont Hospital, Dublin, Ireland
06/07–06/10	Resident	Internal Medicine	Brigham and Women's Hospital (BWH), Boston, MA
07/07–06/10	Clinical Fellow	Internal Medicine	HMS
07/09–09/09	Chief Resident	Medicine	Brigham and Women's Faulkner Hospital (BWFH), Boston, MA
07/10–06/11	Clinical Fellow	Endocrinology, Diabetes and Metabolism	BWH
07/10–06/12	Clinical/Research Fellow	Medicine (Mentor: Dr. Christos Mantzoros)	HMS
07/11–06/12	Research/Clinical Fellow	Endocrinology, Diabetes and Metabolism (Mentor: Dr. Christos Mantzoros)	BWH
07/12–06/13	Chief Medical Resident	Internal Medicine	BWH

07/13–06/14	Research Fellow	Endocrinology, Diabetes and Metabolism (Mentor: Dr. Jonathan Williams)	BWH
-------------	-----------------	--	-----

Faculty Academic Appointments:

07/12–05/16	Instructor	Medicine	HMS
06/16–09/23	Assistant Professor	Medicine	HMS
10/23–	Associate Professor	Medicine	HMS
06/24–	Lecturer	Institute for Medical Engineering and Science	Massachusetts Institute of Technology

Appointments at Hospitals/Affiliated Institutions:

07/12–	Associate Physician	Medicine	BWFH
07/13–	Associate Physician	Endocrinology, Diabetes and Hypertension	BWH
05/15–	Physician	Adult Survivorship Program	Dana-Farber Cancer Institute (DFCI), Boston, MA
09/17–01/25	Associate Physician	Medical Communications	BWH
04/26–	Associate Physician	Endocrinology, Diabetes and Hypertension	Massachusetts General Hospital (MGH)

Other Professional Positions:

2015	Content Expert	HealthEquity Labs / healthiq.com, Plano, TX	
2015–2016	Endocrinology Specialist	Rubicon MD, New York, NY	
2016	Expert witness, providing report for plaintiff	Rydzy vs. McLean et al., No. NNH-CV-14-6047622S (Superior Court of Connecticut, Judicial District of New Haven)	8 hours over 2 months
2018	Consultant	Fusion Pharma, Hamilton, ON, Canada	

2020–2021	Clinical advisor for transgender hormone therapy	Northwestern Memorial Hospital Gender Pathways Program, Chicago, IL	
2020–	Clinical advisor for transgender hormone therapy	Oslo Municipal Health Center for Gender and Sexuality, Oslo, Norway	2 hours per month
2020	Expert witness for the defendant, providing pre-trial report	Plate et al. vs. Estate of Paul Weeks	10 hours over 3 months
2021	Clinical advisor for transgender hormone therapy	Cambridge Health Alliance-Malden, Malden, MA	
2025–2026	Expert witness for the plaintiffs, providing report, deposition, and trial testimony	Keohane et al. v. Dixon et al., No. 4:24-cv-434-AW-MAF (United States District Court for the Northern District of Florida, Tallahassee Division)	Total of 50 hours over 7 months
2025–2026	Expert witness, providing advice to defendant	Anzu v. Kaiser Foundation Health Plan of the Northwest et al., No. 24CV52050 (Circuit Court of the State of Oregon for the County of Multnomah)	Total of 4 hours over 2 months
2025–2026	Expert witness, providing advice to defendant	<i>Lovdahl v. Kaiser Foundation Hospitals</i> , No. STK-cv-UMM-2023-0006100 (Cal. Superior Ct., San Joaquin County)	

Major Administrative Leadership Positions:

Local

2006–2007	Associate Tutor, Intermediate Cycle 1	RCSI
2012–2019	Section Director for Endocrinology, Introduction to Clinical Medicine (IN710M.23)	Harvard-Massachusetts Institute of Technology (MIT) Health Sciences and Technology, Boston, MA
2013–	Course Director, Fundamentals of Clinical and Translational Research	Harvard Catalyst, Boston, MA
2014–2015	Course Co-Director, Endocrine Clinical Case Conference Continuing Medical Education (CME) course	BWH and HMS

2014–2017	Associate Program Director, Fellowship Program in Endocrinology, Diabetes and Hypertension	BWH
2014–2017	Assistant Program Director, Internal Medicine Residency Program	BWH
2014–	Course Director, Brigham Endocrinology Board Review Course	BWH
2014–	Lead Faculty for Medical Endocrinology, Reproductive Endocrinology and Infertility Fellowship Program	BWH
2014–2023	Core Faculty and Design Faculty, Homeostasis 2 (PWY131)	HMS
2014–	Residency Scheduling Consultant, Internal Medicine Residency Program	BWH
2015	Course Director, Harvard Current Trends in Endocrinology	HMS
2015–2016	Course Director, Fundamentals of Medical Education	Center for Faculty Development & Diversity (CFDD), BWH
2015–2017	Course Director, Leadership Strategies for the Researcher	Harvard Catalyst
2015–	Course Director, Endocrine Clinical Case Conference CME course	BWH and HMS
2016–2017	Clinical Navigator, “HMX Fundamentals: Biochemistry”	HMS
2016–	Course Director, Endocrinology and Metabolism (ME508M.23)	HMS
2017–	Program Director, Fellowship Program in Endocrinology, Diabetes & Metabolism	BWH
2021	Director, Learning Collaborative on Diabetes Prevention in LGBTQIA+ populations	Fenway Health
2022–	Course Planner, Brigham Center for Transgender Health Grand Round Series	BWH
2022–	Director of Education, Center for Transgender Health	BWH
2023–	Course Co-Director, Innovations and New Practices in Internal Medicine 2023	HMS

2024–	Core Faculty, Integrated Human Physiology III (PWY134)	HMS
2024–	Program Director, Fellowship Program in Transgender Medicine	BWH
2025–	Course Co-Director, Sex- and gender-informed medicine: Research, clinical practice, and population health (AISC626.0)	HMS
2025–	Course Director, MGB Transgender Health Grand Rounds	MGB
2025–	Co-director, Sexual and Gender Minority Health Frontiers in Healthcare Theme	HMS

International

2014	Co-Director, Diabetes management academy. Two-day CME course for Latin-American physicians.	Asociación Civil de Investigación y Desarrollo en Salud (ACINDES), Buenos Aires, Argentina
2014	Co-Director, Effectively communicating research. Two-day CME course for Latin-American physicians.	ACINDES
2014	Co-Director, Effectively communicating research. Three-hour subcomponent of a larger CME course for Latin-American physicians.	ACINDES
2017	Director, Update in endocrinology. Four-day CME course for Latin-American physicians	ACINDES

Committee Service:**Local**

2007–2010	Housestaff Committee	Department of Medicine, BWH
2009	Intensive Care Unit Committee	BWFH
2009	Meditech Committee	BWFH
2009	Pharmacy and Therapeutics Committee	BWFH
2009	Ethics Committee	BWFH
2009–2010	Drug Safety Committee	BWH
2010, 2013, 2014, 2016	Housestaff Selection Committee	Department of Medicine, BWH

2014–2020	Internal Medicine Recruitment Subcommittee	Department of Medicine, BWH
2014–	The Academy at Harvard Medical School	HMS
2014–	Clinical Competency Committee	Division of Endocrinology, Diabetes and Hypertension, BWH Chair
2014–	Program Evaluation Committee	Division of Endocrinology, Diabetes and Hypertension, BWH Chair
2014–	Fellowship Selection Committee	Division of Endocrinology, Diabetes and Hypertension, BWH Chair
2015	Course Review Committee, HST.060	Harvard-Massachusetts Institute of Technology Division of Health Sciences and Technology, Boston, MA
2016	Committee for Internal Review of BWH Abdominal Diagnostic Radiology Fellowship Program	Partners Healthcare Office of Graduate Medical Education
2017	Endocrine Division Retreat Planning Committee	Division of Endocrinology, Diabetes and Hypertension, BWH
2017–2018	Clinical Process Working Group	Division of Endocrinology, Diabetes and Hypertension, BWH
2018–2020	Admissions Committee, Medical Degree Program	Harvard-Massachusetts Institute of Technology Program of Health Sciences and Technology (HST)
2019–2020	Scholarship Oversight Committee, Kate Millington	Boston Children’s Hospital
2020–2023	BWH Graduate Medical Education Committee	BWH
2023	Honors Examiner, Exam Committee, Casey Orozoco-Poore	HMS
2023	Mass General Brigham (MGB) Graduate Medical Education Special Review ad hoc committee	MGB
2023–	MGB Graduate Medical Education Committee	MGB

2025–	MGB Graduate Medical Education – Executive subcommittee	MGB
2025	Member, Master of Medical Sciences in Clinical Investigation Thesis Committee, Ons Kaabia	HMS

National

2017–2019	Continuing Board Certification: Vision for the Future Commission	American Board of Medical Specialties
2019–2021	Remediation Task Force	American Board of Medical Specialties
2019–2021	Milestones 2.0 Working Group	Accreditation Council for Graduate Medical Education

International

2019	Advisory committee, Norwegian Guideline Committee for Healthcare for Persons with Gender Incongruence / Gender Dysphoria	Norwegian Directorate for Health and Social Affairs
------	--	---

Professional Societies:

1999–2005	Norwegian Medical Association	
2005–2007	Irish Medical Society	
2007–2010	American College of Physicians	
2007–2010	American Medical Association	
2007–	Royal College of Physicians in Ireland	Member of the Royal College of Physicians in Ireland (MRCPI)
2007–	Massachusetts Medical Society (MMS)	
	2018–2022	Member, Committee on Medical Education
	2020–	Member, LGBTQ Health Disparities Grant Selection Committee
	2022–2025	Vice-Chair, Committee on Medical Education
	2025–	Chair, Committee on Medical Education
2008–	Endocrine Society	
	2016–2021	Member, Clinical Endocrine Education Committee
	2016–2021	Chair, Fellows Training Series (FTS) Steering Group

- 2018– Member, Abstract Review Committee, Endocrine Society's Annual Meeting & Expo (ENDO)
- 2019–2023 Member, Transgender Medicine & Research Special Interest Group Steering Committee
- 2020, 2023 Judge, Presidential Poster Competition
- 2022–2025 Member, Annual Meeting Steering Committee
- 2022–2023 Member, Special Interest Group Advisory Panel
- 2022–2024 Chair, Oncoendocrinology Special Interest Group
- 2025– Member, Clinical Guidelines Committee
- 2010–2014 American Association of Clinical Endocrinologists
- 2011–2013 American Thyroid Association
- 2014–2020 American Society of Clinical Oncology
- 2014– Association of Program Directors in Endocrinology and Metabolism (APDEM)
 - 2019–2025 Member, Finance Committee
 - 2019–2024 Member, Transgender Curriculum Writing Group
 - 2021–2024 Member, Milestones 2.0 Implementation Committee
 - 2022–2025 Co-chair, Curriculum Committee
 - 2023–2025 Member, APDEM Council
 - 2025– Secretary-treasurer
 - 2025– Chair, Finance Committee
- 2016–2017 Association of Program Directors in Internal Medicine
- 2016– Association of Specialty Professors
- 2017– World Professional Association for Transgender Health (WPATH)
 - 2022–2024 Member, Global Education Institute Faculty Development Committee
 - 2022– Medical Co-Lead, Global Education Institute Curriculum Development Committee
 - 2022– Member, Global Education Institute Steering Group
- 2018– United States Professional Association for Transgender Health (USPATH)
 - 2019– Member, Abstract Review Committee, and lead for “Endocrinology / Hormone Therapy – Adult” category
 - 2021 Adult Clinical Care Co-Lead, USPATH 2021 Scientific Symposium Steering Committee

Grant Review Activities:

2012	Self-Initiated Research Funding	South African Medical Research Council
	2012	<i>Ad hoc</i> reviewer
2022	Education research grant	Physician Services Incorporated (PSI) Foundation, Ontario, Canada
	2022	<i>Ad hoc</i> reviewer

Editorial Activities:

***Ad hoc* Reviewer**

Accreditation Council for Continuing Medical Education Content Reviewer
American Association of Clinical Endocrinologists (AACE) Clinical Case Reports
Andrology & Gynecology: Current Research
BioMed Central (BMC) Endocrine Disorders
BMC Cardiovascular Disorders
CA: A Cancer Journal for Clinicians
Clinical Advances in Hematology & Oncology
Clinical Endocrinology
Endocrine Practice
Frontiers in Endocrinology
Frontiers in Reproductive Health
Hormone Research in Pediatrics
International Journal of Transgender Health
Irish Journal of Medical Science
JAMA Internal Medicine
Journal of Cancer Survivorship
Journal of Clinical Endocrinology & Metabolism
Journal of Clinical Investigation
Journal of Clinical Oncology – Oncology Practice
Journal of the Endocrine Society
Journal of General Internal Medicine
Journal of Medical Education and Curricular Development
Journal of Medical Internet Research
Journal of Medical Internet Research - Dermatology
Journal of Sexual Medicine
Journal of the Endocrine Society
Metabolism
Nigerian Journal of Clinical Practice
Open Forum Infectious Diseases
PLoS One
Sexual Medicine Reviews
The Medical Letter on Drugs and Therapeutics
The Oncologist

*Transgender Health***Editorial Roles**

2011	Peer reviewer	American College of Physicians (ACP) Medicine
2014	Peer reviewer	First Aid for the United States Medical Licensing Exam (USMLE) Step 3
2016–	Education Editor	New England Journal of Medicine (NEJM) Group
	This role involves editorial oversight of the educational products offered by NEJM Group, primarily NEJM Knowledge+ (≈72,000 separate users from 2016 until June 15, 2021), and NEJM Resident 360 (≈127,000 separate users from 2017 until Nov 17, 2021; ≈60,000 page views per week).	
2019, 2022	Peer reviewer	Alosa Health
2023	Peer reviewer	Merck Manual
2024	Guest editor, special print supplement to the New England Journal of Medicine	Clinical Endocrinology and Diabetes Update from NEJM Group
2025–	Editorial Board Member	<i>Endocrine Practice</i>
2025–	Associate Editor	<i>NEJM Clinician</i>

Honors and Prizes:

2000–2005	Medical School Prizes	RCSI	20 academic prizes. Examples include: - Norman Rae Gold Medal and First Prize in Biochemistry - Kane Medal and First Prize in Physiology
2002	Dr. H. H. Stewart Medical Scholarship in Biochemistry, Third Prize	National University of Ireland (NUI), Dublin, Ireland	Third place in Biochemistry based on the results of the final examination of all students in the NUI medical schools
2003	Dr. H. H. Stewart Medical Scholarship in Pathology, First Prize	NUI	First place in Pathology based on the results of the final examination of all students in the NUI medical schools

2003	Sheppard Memorial Medal in Pathology	Beaumont Hospital	Highest mark in a separate Pathology oral examination
2004	Dr. H. H. Stewart Medical Scholarship in General Practice, First Prize	NUI	First place in General Practice based on the results of the final examination of all students in the NUI medical schools
2005	Dr. Desmond Lyons Prize in Internal Medicine	Beaumont Hospital	Highest mark in the final year written Internal Medicine examination
2005	Reuben Harvey Prize	Royal College of Physicians in Ireland, Dublin, Ireland	Highest aggregate mark in Ireland in Medicine, Surgery, Obstetrics and Gynecology
2013 and 2015	Fellowship Teaching Award – Endocrinology	BWH, Department of Medicine	Awarded by medical residents for compassion and dedication to teaching
2014–2015	Rabkin Fellowship in Medical Education	Beth Israel Deaconess Medical Center (BIDMC), Boston, MA	One-year competitive fellowship in Medical Education
2015	Certificate in Excellence in Tutoring	HMS	Awarded based on tutor evaluation by students
2016	Nominee, Harvard Medical School Donald O’Hara Faculty Prize for Excellence in Teaching (Years I & II)	HMS	Nominated by medical students for excellence in preclinical teaching
2017	Macy Program for Educators in Health Professions	Harvard Macy Institute	Professional Development Course in Medical Education
2019	Gail Backus Endocrinology Faculty Clinical Teaching Award	Division of Endocrinology, Diabetes and Hypertension, BWH	Selected by clinical endocrinology fellow for outstanding clinical teaching of endocrinology fellows and a significant positive impact on their clinical development
2019	Distinguished Service Award	American Board of Medical Specialties	Awarded to all the members of the Vision Commission of which I was a member
2019	Ambulatory Lecturing Attending Award	Department of Medicine, BWH	Awarded to the attending who best exemplifies excellence in ambulatory

			lecturing, as selected by the housestaff
2020	Above and Beyond Award	Division of Endocrinology, Diabetes and Hypertension, BWH	Awarded to a faculty member who has gone above and beyond in helping out their colleagues
2025	2025 Brigham and Women’s Hospital Education Award	BWH	The highest recognition from within BWH, honoring faculty educators who have made significant and lasting contributions to medical education, training, and research.
2025	LGBTQ Health Award	MMS	Awarded to an MMS member in recognition of outstanding contributions to LGBTQ health

Report of Funded and Unfunded Projects

Funding Information:

Past

- 2015–2019 Development and evaluation of a novel curriculum using web-based educational tools to improve internal medicine residents’ quality of care of patients with type 2 diabetes mellitus
Educational grant provided by Dr. Marshall Wolf
Principal investigator
The goal of this project was to develop new online learning modules for internal medicine residents to improve diabetes teaching and diabetes care.
- 2017 Applying the flipped classroom method to GME
BWH Department of Medicine Macy Scholarship
Principal investigator
This career development award allowed me to attend the Macy Program for Educators in the Health Professions to refine and execute the above project.

Report of Local Teaching and Training

Teaching of Students in Courses:

HMS/HSDM/DMS Courses

- 2009, 2012, Endocrinology Pathophysiology Course
 - 2013, 2014, 2nd-year medical and dental students
 - 2016
- 2009/2014: 12 hours weekly for 5 weeks
2012/2013: Substitute tutor, total 3 hours per year
2016: Lecturer, total 7.5 hours

2011–2019	Introduction to Clinical Medicine (IN710M.23) 2 nd -year medical students	Harvard-MIT Health Sciences and Technology One 2-hr session per year
2012–2013	Principal Clinical Experience (ME600M.23) 3 rd -year medical students	One 1-hr session per month for 12 months
2012–2013	Medicine Core II Subinternship (ME550M.23) 4 th -year medical students	One 1-hr session per month for 12 months
2013	Introduction to the Profession (IN555.0) 1 st -year medical students	Two 3-hr sessions
2014	Patient-Doctor 2 2 nd -year medical students	One 3-hr session
2015	Integration Week 2 nd -year medical students	One 3-hr session
2016–	Core endocrinology faculty, Homeostasis 2 (PWY131) 1 st year medical students	HMS 16 1-hr lectures per week for 10 weeks per year
2017	Thyroid Exam, Practice of Medicine (POM100) 1 st year, medical students	HMS One 2-hr lecture
2018–2019	Advanced Abdominal Exam, Practice of Medicine (POM100) 2 nd year medical students	HMS One 3-hr session per year
2021–	Sex- and gender-informed medicine: Research, clinical practice, and population health (AISC626.0) 3 rd and 4 th year Pathways medical students	HMS One 3-hour workshop per year
2021–2024	Introduction to Clinical Medicine (HST.201) PhD students in HST program	HMS 1 hour per year

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2009	BWFH morning reports Internal Medicine residents	BWFH 32 one-hour case-based morning reports
2009	Intern curriculum Internal Medicine interns	BWFH 10 one-hour lectures

2009	Morbidity and Mortality Conference Internal Medicine faculty and residents	BWFH Two one-hour conferences
2009	Case conference Internal Medicine residents	BWFH Instituted this one-hour resident-led case-based conference.
2012	Thyroid exam workshop Primary Care residents	BWH Preceptor for physical exam
2012–2013	Cardiovascular endocrinology research group (CERG) meetings Members of CERG	BWH Two two-hour research talks
2012–2013	BWH morning reports Internal Medicine residents	BWH 38 one-hour case-based morning reports
2012–2014	“Thyroid functions tests – complex cases” Internal Medicine residents	BWH Five one-hour lectures
2012–2016	“Novel antidiabetic therapies” Internal Medicine residents	BWH and BWFH Four one-hour lectures
2013	“Adrenal insufficiency” Harvard Vanguard Medical Associated (HVMA) Primary Care residents	BWH One-hour lecture
2013	“Outgoing chief panel” Incoming chief residents	Chief resident retreat, Partners Office of Resources to Trainees, Boston, MA One-hour panel discussant
2013	“Case conference” (discussant) HVMA Primary Care residents	BWH One-hour lecture
2013	“Pheochromocytoma – the basics” Internal Medicine residents	BWH One-hour lecture
2013–2015	“Common endocrine referrals” Internal Medicine residents	BWH and BWFH Four one-hour lectures
2013–	Discussant, morning report Internal Medicine residents	BWH and BWFH Seven one-hour case-based morning reports annually
2014	“Hypothyroidism and the thyroid exam” Internal Medicine residents	BWH Three 1.5-hour lectures

2015	“Incorporating medical education and teaching in your career” Fellows in Internal Medicine subspecialties	BWH Two-hour panel discussion
2015	“MedForum: A patient with an obstructing multinodular goiter” Internal Medicine residents and faculty	Department of Medicine, VA Boston Healthcare System One-hour case discussion
2015	“Management of cardiovascular risk factors in patient with diabetes mellitus” HVMA Primary Care residents	BWH One-hour lecture
2015	“Advanced management of difficult-to-control diabetes in the ambulatory setting” Internal Medicine residents	BWH Two one-hour lectures
2015, 2017	“Endocrine management of the transgender patient” Endocrinology fellows	BWH One-hour lecture
2017	“Treatment of symptoms of the menopause” Endocrinology fellows	BWH One-hour lecture
2017	“Culturally competent care for LGBT patients” Professionalism and cross-cultural care curriculum Dermatology residents	BWH One-hour small group session
2017–18	“Introduction to novel antidiabetic agents” Internal medicine residents	BWH Five one-hour lectures
2017, 2019	“Gender dysphoria and medical management of the transgender patient” Internal medicine residents	BWH One-hour lecture
2018	“Adrenal insufficiency” Internal medicine residents	BWH One-hour lecture
2018, 2021, 2022	“Medical care for transgender patients” Internal medicine residents	BWH One-hour lecture
2019	“Master clinician – transgender”	BWH

	Internal medicine residents	One-hour lecture
2019	“Trans Health: Changing Paradigms in a Changing Society”	BWH
	Internal medicine residents	Five one-hour lectures
2019	“Trans Health: Changing Paradigms in a Changing Society”	BWH
	Maternal-fetal medicine fellows	One-hour lecture
2020–	“In-Training Exam Review”	BWH
	Endocrinology fellows	Annual one-hour lecture
2020	“Cases in oncoendocrinology”	New England chapter of the American Association of Clinical Endocrinologists
	Endocrinology fellows	One-hour lecture
2020	“Writing multiple choice questions in medical education: Do’s and don’t’s”	BWH
	Internal medicine residents	One-hour lecture
2021	“Medical care for transgender patients”	BWH
	HVMA Primary Care residents	One-hour case-based talk
2022	“Medical care for transgender patients”	Salem Hospital, Salem, MA
	Internal medicine residents	One-hour lecture
2022	“Endocrinopathies with immune checkpoint inhibitors”	BWH
	Internal medicine residents	One-hour lecture
2022–	“Introduction to endocrine care for transgender patients”	BWH
	Endocrinology fellows	Annual one-hour lecture
2022–	“Board review – transgender endocrinology”	BWH
	Endocrinology fellows	Annual one-hour lecture
2024	“Board review – calcium and bone disorders”	BWH
	Endocrinology fellows	One-hour lecture

Clinical Supervisory and Training Responsibilities:

2012–2017	Supervising attending for internal medicine interns and residents on the general medical service	BWH 50 hours per week for 2-10 weeks per year
-----------	--	--

2014–2017	Principal clinical experience student advisor for 2 nd and 3 rd year medical students	HMS Two hours per week for 30 weeks per year
2014–	Preceptor for endocrinology fellows on the inpatient consult service	BWH 40 hours per week for 2 weeks per year
2014–	Preceptor for the endocrinology fellows' weekly general endocrinology continuity clinic	BWH One half-day session per week for 40 weeks per year
2018–2020	Specialty advisor for medical students applying for internal medicine residency	HMS 5 hours per year
2022–2025	Mentor, WPATH Global Education Institute Medical Mentorship Group. Served as formal mentor in the medical management of gender-diverse patients for 10 clinicians from the United States, the United Kingdom, and Mexico.	WPATH 2.5 hours per month for six months

Laboratory and Other Research Supervisory and Training Responsibilities

2015	Capstone project faculty advisor Participants in United Kingdom Clinical Scholars Research Training Program	HMS Office of Global Education 5 hours
2016	Capstone project faculty advisor Participants in Global Clinical Scholars Research Training Program	HMS Office of Global Education 15 hours

Formal Teaching of Peers (e.g., CME and other continuing education courses):

No presentations below were sponsored by outside entities

2013	"Pituitary disorders" Brigham Intensive Review of Internal Medicine	Single presentation Boston, MA
2013–2014	"Diagnosis and management of male hypogonadism" Office Practice of Primary Care Medicine	Single presentation Boston, MA
2014	"Endocrine emergencies" Brigham Board Review in Endocrinology	Single presentation Boston, MA
2014	"Carcinoid and pancreatic neuroendocrine tumors" Brigham Board Review in Endocrinology	Single presentation Boston, MA
2014	"Hirsutism and hyperandrogenism" Brigham Board Review in Endocrinology	Single presentation Boston, MA
2015	"Thyroid and calcium disorders – What a hospitalist needs to know"	Single presentation

	Update in Hospital Medicine	Boston, MA
2015	“Adrenal cases”	Single presentation
	Harvard Current Trends in Endocrinology	Boston, MA
2015	“Case presentation and panel discussion: long-term and late effects”	Single presentation
	Cancer Survivorship: Optimizing Care and Outcomes	Boston, MA
2016	“Case presentation and panel discussion: long-term and late effects”	Annual presentation
	Cancer Survivorship: Optimizing Care and Outcomes	Boston, MA
2016	“Endocrine and diabetes”	Single presentation
	Brigham Medicine Update and Maintenance of Certification Preparation	Boston, MA
2016	“Endocrine maintenance of certification”	Single presentation
	Brigham Medicine Update and Maintenance of Certification Preparation	Boston, MA
2016	“Prolactin and Growth Hormone Excess”	Single presentation
	Brigham Board Review in Endocrinology	Boston, MA
2016	“Management of Menopausal Symptoms”	Single presentation
	Brigham Board Review in Endocrinology	Boston, MA
2016	“Gender Dysphoria and Medical Management of the Transgender Patient”	Single presentation
	Brigham Board Review in Endocrinology	Boston, MA
2016–	“Testosterone replacement therapy”	Annual presentation
	Office Practice of Primary Care Medicine	Boston, MA
2017	“Understanding our differences: the role of hormonal therapy, surgery and reproductive treatment for transgender patients”	Single presentation
	Women’s Health Forum: Hormones: Do They Define Us?	Framingham, MA
2017–2019	“Gender-Affirming Hormonal Treatment of Transgender Individuals: Changing Paradigms in a Changing Society”	Annual presentation
	Clinical Endocrinology	Boston, MA
2018	“Thyroid Cases for the Boards”	Single presentation
	Brigham Board Review in Endocrinology	Boston, MA
2018	“Management of Menopausal Symptoms”	Single presentation
	Brigham Board Review in Endocrinology	Boston, MA

2018	“Gender Dysphoria and Medical Management of the Transgender Patient” Brigham Board Review in Endocrinology	Single presentation Boston, MA
2018, 2019, 2021, 2023	“Incorporating e-learning to engage learners and enhance retention” Advanced Teaching Skills Course	Single presentation Boston, MA
2019	“Gender identity in clinical care” Advancing Women’s Health: Care Across Multiple Disciplines	Single presentation Boston, MA
2019	“Care of the LGBTQ Patient” Office Practice of Primary Care Medicine	Single presentation Boston, MA
2019	“Focus on long-term metabolic effects of cancer treatments: Patient-tailored approaches to management” Diabetes & cancer: Novel links and treatments	Single workshop Boston, MA
2019	“Focus on survivorship: Optimizing health after surviving cancer” Diabetes & cancer: Novel links and treatments	Single workshop Boston, MA
2020	“Care of the transgender patient: Hormonal therapy and its consequences” Innovations and New Practices in Internal Medicine 2020	Single presentation
2020	“Thyroid Cases for the Boards” Brigham Board Review in Endocrinology	Single presentation Boston, MA
2020	“Management of Menopausal Symptoms” Brigham Board Review in Endocrinology	Single presentation Boston, MA
2020	“Hormonal Treatment of Transgender and Gender-Diverse Individuals” Brigham Board Review in Endocrinology	Single presentation Boston, MA
2020	“Care of the transgender patient” Intensive Review of Internal Medicine	Single presentation Boston, MA
2020–2022	“Training to Teach - Egypt” Office of External Education, HMS	Small group facilitator Egypt
2021	“Oncoendocrinology in cancer patients and survivors” Dana-Farber Cancer Institute Survivorship Course	Single presentation Boston, MA
2022	“Training to Teach - China” Office of External Education, HMS	Small group facilitator China

2022, 2023, 2024	“Building an Academic Trans Health Program” Fenway Health’s Advancing Excellence in Transgender Health course	Panel member Boston, MA
2023	“Primary care for transgender and gender diverse individuals” Advancing Women’s Health: A 2023 Update	Single presentation Boston, MA
2023	“Update in Thyroid Disease” Innovations and New Practices in Internal Medicine 2023	Single presentation Boston, MA
2023	“Overview of Transgender Care” Intensive Review of Internal Medicine	Single presentation Boston, MA
2023	“Primary Care for Transgender and Gender Diverse People” Intensive Review of Internal Medicine	Single presentation Boston, MA
2023	“Primary Care for Transgender and Gender Diverse People” Fish Center Women’s Health Clinical CME Seminar	Single presentation Boston, MA
2023	“Complicated Case Studies in Hormone Replacement” WPATH Global Education Institute, Advanced Medical Health Course	Single presentation Westminster, CO
2024	“Clinical care for transgender and gender diverse patients” Office Practice of Primary Care Medicine	Single presentation Boston, MA
2024	“Cancer risk, screening, and prevention for transgender and gender diverse people” Dana-Farber Annual Collaborative Symposium	Single presentation Boston, MA
2025	“Gender-affirming hormone therapy initiation and antiretroviral therapy considerations” The Scott M. Hammer Annual Update on HIV Management	Single presentation New York City, NY
2025	“Foundations in Gender-Affirming Hormone Therapy for Adults” WPATH Global Education Institute, Advanced Medical Health Course	Single presentation Santa Ana Pueblo, NM
2025	“Complicated Case Studies in Hormone Replacement” WPATH Global Education Institute, Advanced Medical Health Course	Single presentation Santa Ana Pueblo, NM

2025	“Transgender Health Matters: From Terminology to Treatment” Lawrence General Hospital Risk Management Grand Rounds	Single presentation Lawrence, MA
2025	“Gender-Affirming Hormone Care in 2025” Fish Center Women’s Health Clinical CME Seminar	Single presentation Boston, MA
2025	“Clinical Challenges, Educational Solutions: Building Competence in Transgender Health” Duke Endocrinology Grand Rounds	Single presentation Durham, NC
2026	“Evolving Diabetes Care in People With HIV: Screening, Treatment, and the Rise of GLP-1 Therapies” The Scott M. Hammer Annual Update on HIV Management	Single presentation New York City, NY

Local Invited Presentations:

No presentations below were sponsored by outside entities

2010	“A 66-year-old man with hypothyroidism - Novel antineoplastic agents and their effects on thyroid function” Longwood area Endocrinology Grand Rounds, Division of Endocrinology, Diabetes and Hypertension, Department of Medicine, BWH
2011	“Osteomalacia” Internal Medicine Grand Rounds, BWH
2012	“Lipodystrophy” Obesity Medicine Interhospital Rounds, Joslin Diabetes Center, Boston, MA
2013	“Phosphate homeostasis” Internal Medicine Grand Rounds, BWH
2015, 2017, 2021	“The endocrine management of transgender individuals” Brigham Human Immunodeficiency Virus Conference, BWH
2016	“Lecturing: Turning passive snoozing into active engagement” Fundamentals in Medical Education, CFDD, BWH
2016	Transgender health panel Lesbian, gay, bisexual, transgender and allies resource group, BWH
2016	“Endocrine effects of novel checkpoint inhibitors” Internal Medicine Grand Rounds, BWH
2016	“A 48-year-old woman with chest pain” Internal Medicine Grand Rounds, BWH
2016	“MasterClass: Treatment of symptoms of the menopause”

- Endocrinology Division MasterClass conference, BWH
- 2018 “Create educational videos that boost learning”
Workshop, Department of Medicine Education Retreat, BWH
- 2018 “Embracing NEJM Education Tools – Maximizing Learning & Teaching”
Lecture, Brigham Education Institute, BWH
- 2018 “Taking Care of the Gender Non-Conforming Patient: Key considerations”
Lecture, Faculty Development Bedside Series, BWH
- 2019 “Preserving bone health in the patient with breast cancer”
Lecture, Breast Oncology Seminar Series, DFCI
- 2020 “Adrenal insufficiency and other endocrinopathies from immune checkpoint inhibitors”
Lecture, Oncology Hospital Medicine Seminar, BWH and DFCI
- 2020 “Care of the transgender patient: Hormonal therapy and its consequences”
Lecture, Department of Medicine Grand Rounds, BWFH
- 2020 “Trans Health: Changing Paradigms in a Changing Society”
Lecture, Southern Jamaica Plain Health Center Educational Conference, BWH
- 2020 “Hypocalcemia”, “Hypercalcemia”, “Transgender Health”, and “Careers in endocrinology”
Podcasts, “Run the List” podcast, BWH
- 2020 “Connecting the NEJM Learning Platform to Your Continuing Education”
Invited speaker, Brigham Education Institute, BWH
- 2020 “Becoming visible: Considerations for coming out in healthcare”
Panel member, Lesbian, Gay, Bisexual, Transgender and Queer Employee Resource Group, BWH
- 2021 “Lead the Change: Transgender Advocacy and Gender Concordant Care”
Panel member, Public Policy Series, BWH
- 2022 “Immune checkpoint inhibitor-induced endocrinopathies in the perioperative setting”
Invited speaker, Weiner Center for Preoperative Evaluation Education Series, BWH
- 2022 “Eliminating disparities in the care of the LGBTQ+ community”
Moderator, panel discussion for “Addressing Health Disparities: Clinical Insights on Race and Social Justice” webinar, HMS
- 2022 “Providing gender-affirming medical care during the Covid-19 pandemic: A case from the endocrine clinic”
Plenary speaker, Brigham Center for Transgender Health Grand Rounds, BWH
- 2022 “Care of the transgender patient”
Invited speaker, Brookside Community Health Center Provider Meeting, BWH
- 2022, 2024 “Management of menopausal symptoms”
Lecture, Indian Health Service Remote CME Program, BWH
- 2022 “LGBTQ+ health in cancer care”

- 2022 Lecture, Department of Marketing and Communications, DFCI
 “Providing cardiovascular care to transgender patients”
 Lecture, Corrigan's Women's Heart Health Program, Massachusetts General Hospital
- 2023 “Incorporating technology in your lectures - Engage your learners and enhance retention!”
 Lecture, Annual Program Director Retreat, Mass General Brigham Graduate Medical Education Office, Mass General Brigham
- 2023 “Primary Care for Transgender and Gender Diverse Individuals”
 Lecture, Department of Medicine Grand Rounds, BWFH
- 2023 “LGBTQ+ health in cancer care”
 Lecture, DFCI Open Forum
- 2023 “Caring for Transgender and Gender Diverse People”
 Lecture, Southern Jamaica Plain Health Center Educational Conference, BWH
- 2023 “Breast health in transgender and gender diverse individuals”
 Lecture, Breast Oncology Seminar Series, DFCI
- 2023 “MasterClass: Standards of Care for the Health of Transgender and Gender Diverse People, Version 8”
 Lecture, Division of Endocrinology, Diabetes and Hypertension Noon Conference, BWH
- 2024 “An overview of gender-affirming hormone therapy”
 Lecture, Department of Medicine Grand Rounds, BWFH

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

No presentations below were sponsored by outside entities

Regional

- 2017, 2018 Gender Dysphoria and Medical Management of the Transgender Patient / Obstetrics and Gynecology Resident Teaching Session
 Tufts Medical Center, Department of Obstetrics and Gynecology
- 2021 Gender-affirming hormone therapy / Gender and sexual minority health workshop
 Cambridge Health Alliance-Malden, MA
- 2021 “Clinical diagnosis and management of hyperparathyroidism”
 Podcast, “Curbside consult” podcast, NEJM
- 2022 “Implementing a Regularly Scheduled Series for Continuing Medical Education Credit”
 Lecture, Annual Accreditation Conference, Massachusetts Medical Society

2023 “Immune checkpoint inhibitor-induced endocrinopathies”
Lecture, Fellows Didactic Series, New England Endocrine Alliance

Regional Abstract Oral Presentations

2019 “Increasing metacognitive awareness during medical residency training: Pilot results from a study involving internal medicine residents”. Abstract selected for oral presentation.
Eastern Sociological Society. 2019 Mini Conference on the Sociology of Health Professions Education

National

2014 “Pitfalls and promise of endocrine anti-aging strategies”
Presenter, Plenary Keynote Address, American Academy of Cosmetic Surgery 30th Annual Scientific Meeting, Fort Lauderdale, FL

2014 “Hypertension with VEGF signaling pathway inhibitors”
Presenter, Cardiovascular Endocrinology Research Conference, Morehouse School of Medicine, Atlanta, GA

2016 “Guidelines for letters of recommendations for the Match”
Presenter, American Medical Student Association webinar

2019 “Trans Health: Changing Paradigms in a Changing Society”
Presenter, Internal Medicine Grand Rounds, Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ

2019 “From Priscilla to Northern Lights: Advancing transgender health through education”
Presenter, Babs Siperstein Humanities and Medicine Seminar, Rutgers University, New Brunswick, NJ

2020 “Choose Your Own Healthcare Adventure: Online Clinical Simulation Games for Primary Care Providers of Trans Clients”
Moderator, mini-symposium, WPATH 26th Scientific Symposium, virtual conference

2020– “WPATH Global Education Institute - Advanced Medical Course”
Live-panel facilitator 3 hours twice yearly, virtual conference, WPATH, East Dundee, IL

2021 “A case-based approach to gender-affirming care”
Presenter, Northwestern Memorial Hospital Gender Pathways Program, Chicago, IL

2021 “USPATH 2021 Scientific Symposium – Oral Abstracts – Surgery”
Moderator, oral abstract session, USPATH 2021 Scientific Symposium, virtual conference, USPATH, East Dundee, IL

2021 “Diabetes and other endocrine complications of immune checkpoint inhibitors”
Expert, “Checkpoint NOW” podcast, Duke Health Center, Durham, NC

2022 “Trans Health: Changing Paradigms in a Changing Society”

- Presenter, Endocrinology Grand Rounds, Cedars-Sinai Medical Center, Los Angeles, CA
- 2022 “Transgender medicine across the spectrum”
Moderator, symposium, AACE Annual Meeting 2022, San Diego, CA
- 2022 “Faculty Development: Education and Leadership in Endocrinology. Fellowship Interviews and ABIM Pass Rate”
Presenter, AACE Annual Meeting 2022, San Diego, CA
- 2022 “Alternative agents for androgen blockade in transfeminine individuals”
Presenter, Transgender Health: Comprehensive approaches in primary care ECHO (Extension for Community Health Outcomes), Denver, CO
- 2022 “Board Review Day 2: Reproductive Disorders and Lipids, Obesity, and Nutrition”
Presenter, AACE Annual Meeting 2022, San Diego, CA
- 2022 “Cancer Screening in Gender Minorities”
Presenter, Endocrine Society Transgender Research and Medicine Special Interest Group Webinar, Washington, DC
- 2022 “What is oncoendocrinology?”
Presenter, Endocrine Society Oncoendocrinology Special Interest Group Webinar, Washington, DC
- 2023 “Primary Care for Transgender and Gender Diverse Individuals”
Lecture, Department of Medicine Grand Rounds, Los Angeles County + University of Southern California Medical Center, Los Angeles, CA
- 2023 “Diagnosis and management of male hypogonadism”
Presenter, Internal Medicine Grand Rounds, HCA Healthcare, Nashville, TN
- 2023– “WPATH Global Education Institute - Foundations Course”
Live-panel member, 3 hours twice yearly, virtual conference, WPATH, East Dundee, IL
- 2023 “Care of the transgender patient in a hospital setting”
Lecture, American College of Osteopathic Internists Clinical Challenges in Hospital Medicine, Arlington, VA
- 2023 “Updates in Standards of Care for Transgender and Gender Diverse People Affecting Endocrinologists”
Symposium chair, Endo 2023, Chicago, IL
- 2023 “Teaching and Assessing Internal Medicine Residents: Innovative Educational Products”
Lecture, Academic Internal Medicine Week 2023, Austin, TX
- 2023 “Care of the transgender patient in a hospital setting”
Lecture, American College of Osteopathic Internists Clinical Challenges in Hospital Medicine, Arlington, VA
- 2023 “Primary care for transgender and gender diverse people”
Presenter, Internal Medicine Grand Rounds, HCA Healthcare, Nashville, TN
- 2024 “An overview of gender-affirming hormone therapy”

- Presenter, Endocrinology Grand Rounds, Cedars-Sinai Medical Center, Los Angeles, CA
- 2024 “Hormone Therapy in Non-Binary and Genderqueer Individuals - Town Hall”
Presenter, Transgender Research & Medicine Special Interest Group Virtual Town Hall, Washington, DC
- 2025 “Optimizing Program Leadership: Collaborative Workflows Between Program Directors and Associate Program Directors”
Presenter, Association of Program Directors in Endocrinology and Metabolism Faculty Development Series, Washington, DC

National Abstract Oral Presentations

- 2019 “Implementing the Flipped Classroom into Graduate Medical Education: Feasibility and Effectiveness”. Abstract selected for oral presentation.
Innovations in Medical Education Conference. Transforming Health Professions Education Through Innovation, San Diego, CA.
- 2019 “The Who, Why, and How of Video-Based Education on a Shoestring Budget”. Abstract selected for workshop.
Presenter, Society of General Internal Medicine Annual Meeting, Washington, DC.

International

- 2012 “Thyroid dysfunction from antineoplastic agents.” Online webinar.
European School of Oncology e-Grand Rounds, Milan, Italy
- 2014 “Preventing and managing neuropathy in type 2 diabetes.” Diabetes Management Academy, lecture.
ACINDES, Boston, MA
- 2014 “Preventing and managing nephropathy in type 2 diabetes.” Diabetes Management Academy, lecture.
ACINDES, Boston, MA
- 2014 Visiting Educational Scholar
Tokyo Medical and Dental University, Tokyo, Japan
- 2015 “Thyroid complications of antineoplastic therapies.” Lecture.
National Thyroid Symposium, Norwegian Thyroid Group, Gardermoen, Norway
- 2015 “Tre behandlingsinduserte hormonforstyrrelser – et kamprop for onkoendokrinologi” [Three treatment-induced hormonal disturbances – a battle cry for oncoendocrinology]. Grand Rounds
Norwegian Radium Hospital, Oslo, Norway
- 2018 “Endocrine complications of immune checkpoint inhibitors.” Lecture.
Hospital de Clínicas “José de San Martín”, Buenos Aires, Argentina

- 2021 “HRT101: A conversation on hormonal therapy for trans and intersex activists”. Online lecture.
Gays and Lesbians of Zimbabwe (GALZ), Kushinga, and Trans and Intersex Rising Zimbabwe (TIRZ)
- 2021 “Kjønnsbekreftende endokrinologisk behandling” [Gender-affirming endocrine treatment]. Lecture, “Kjønnsmangfold og seksuelt mangfold” [Gender and sexual diversity] continuing education course, SEX901.
University of Agder, Kristiansand, Norway
- 2021 “Gender-affirming care in adults”. Lecture, “Demystifying Gender: Fostering gender friendly healthcare”.
World Health Organization Collaborating Centre for Adolescent Health, Querencia, and Association for Transgender Health in India, New Dehli, India
- 2021 “Complex cases in transgender health”. Panel discussion, 25th Congress of the World Association for Sexual Health
World Association for Sexual Health and Southern African Sexual Health Association, South Africa.
- 2022 “Overview of gender-affirming hormone therapy”. Lecture
Oslo Municipal Health Center for Gender and Sexuality, Norway.
- 2023 “The new specialty of oncoendocrinology and its relevance to the practicing endocrinologist”. Plenary speaker
The Philippine College of Endocrinology, Diabetes and Metabolism Annual Convention, Manila, Philippines
- 2023 “Transgender Care”. Plenary speaker
The Philippine College of Endocrinology, Diabetes and Metabolism Annual Convention , Manila, Philippines
- 2023 “Endocrine concerns in patients with cancer”. Online lecture.
First Affiliated Hospital of Sun Yat Sen Medical Center Survivorship Education Series, Guangzhou, China
- 2023, 2024 “Nursing care for transgender and gender diverse persons”. Online lecture.
Oncoclínicas, Rio de Janeiro, Brazil
- 2024 “Endocrine management of transgender youth”. Lecture.
Conference on gender incongruence in children and adolescents. Patient Organization for Gender Incongruence, Oslo, Norway.
- 2024 “Gender-affirming medical interventions in youth”. Lecture.
Ayur Initiative, New Delhi, India
- 2025 “Guideline congruence in gender incongruence - providing high-quality gender-affirming hormone therapy to adults”
The Oslo Trans Health Conference 2025, Oslo, Norway

International Abstract Oral Presentations

2012	“Effect of short term / chronic energy deprivation and leptin administration on circulating undercarboxylated osteocalcin levels in humans” Panhellenic Medical Congress on Obesity, Athens, Greece
2012	“Fibroblast growth factor 21 levels in young females display day/night variation and are increased in response to short-term energy deprivation” Panhellenic Medical Congress on Obesity, Athens, Greece
2012	“Changes in GI-secreted hormones after bariatric surgery” Panhellenic Medical Congress on Obesity, Athens, Greece

Report of Clinical Activities and Innovations

Current Licensure and Certification:

2009–	Full License, Massachusetts
2010–	Board Certification, Internal Medicine
2012–	Board Certification, Endocrinology
2021–2023	Certification, WPATH Global Education Institute Standards of Care 7
2021–2023	Full License, Connecticut
2021–2024	Full License, Maine
2022–2024	Full License, New Hampshire
2022–2024	Full License, Rhode Island
2023–	Certification, WPATH Global Education Institute Standards of Care 8

Practice Activities:

2009– 2014	Moonlighter, Internal Medicine	Department of Medicine, BWFH	2 shifts per month
2012– 2015	Moonlighter, Internal Medicine	Spaulding Hospital for Continuing Medical Care, Cambridge, MA	2 shifts per month
2012– 2017	Attending, General Medicine Service	Department of Medicine, BWH	50 hours per week for 2- 10 weeks per year
2013–	Attending, Endocrinology Clinic	Division of Endocrinology, BWH	Three half-day sessions per week yearly
2014–	Endocrinology Consult Service	Division of Endocrinology, BWH	40 hours per week for two weeks per year

2015– 2024	Attending, Oncoendocrinology Clinic	DFCI	One half-day session per week yearly
---------------	---	------	---

Clinical Innovations:

2014–2024	Creation of the field of oncoendocrinology and establishment of an endocrinology clinic focused on care of the cancer patient at DFCI.	Endocrine disorders in patients with cancer require a specific skillset including knowledge of both endocrinology and oncology which I acquired, thus creating the field of oncoendocrinology at BWH. I also led the division's efforts in creating an innovative oncoendocrinology clinic at DFCI. My experiences with creating this clinic have been shared with individuals interested in creating similar programs in Norway and Argentina, and have been published in <i>Endocrine Practice</i> . I am currently spearheading the creation of a collaborative of interested oncoendocrinologists to share clinical experiences, as well as educational and research resources, which lead to the creation of a Special Interest Group at the Endocrine Society which I am leading.
2017–	Establishment of the program in transgender health at BWH and creation of a BWH Center in Transgender Health	As a provider of gender-affirming hormones to transgender and gender diverse patients since 2010, I identified the gaps in the care provided at BWH to this group and worked with a diverse group of stakeholders to address these. These efforts contributed to the creation of a variety of policies addressing relevant topics of (rooming, gender information in the electronic health record), to the creation of a multidisciplinary group of providers of clinical services, and finally to the creation of the BWH Center for Transgender Health.
2019	Advocacy for access to gender-affirming care in Norway	As a native of Norway, I have followed the discussion around provision of clinical care to transgender and gender diverse individuals in that country. This had relied on an outdated "gate-keeper" model; in January 2019, based on my background including prominence in the area of transgender health, I was invited to work with the Norwegian Directorate for Health and Social Affairs to rethink how this care should be organized. As an expert external to the very small community of clinicians providing this care in Norway, I was able to advocate for changes that would provide greater access to a wider variety of healthcare services for this population, changes which are currently in the process of being incorporated into the national health service.
2019	Creation of formal guidelines on interpretation of bone mineral density testing in transgender patients	Bone mineral density testing is used to diagnosed bone fragility (osteopenia and osteoporosis), ideally before fractures occur. However, guidelines on when to obtain such testing as well as the interpretation of some of the bone mineral density measurements differ based on gender, and the best approach to this testing in transgender / gender non-confirming patients had not been established. I served on a guideline panel convened by the International Society for Clinical Densitometry (ISCD) to review the current research and make clinical recommendations; this led to the publication of the official position on this topic by the ISCD which serves as the authoritative guidelines.

- 2020–
Creation of a model of expanding gender-affirming care to clinical practices nationally and internationally
- With increasing demand for gender-affirming care, a variety of clinicians and institutions have identified this as a gap in their skillset and have sought to fill this. Lectures can address some of the knowledge gaps but are insufficient on their own. Using my knowledge of medical education principles, I developed a program of lectures, small group sessions, and mentored practice in gender-affirming medicine. Implementing this program allowed the creation and continuation of programs providing gender-affirming care both locally, nationally, and internationally. Since developing these programs, I have been asked to replicate the mentorship as part of WPATH's Global Education Institute mentorship program.
- 2025–
Creation of a student-led, faculty-supervised, clinic in gender-affirming care
- Worked with student leaders to create the Medical Outreach for Supportive, Affirming, Inclusive Care (MOSAIC) Access Clinic. This clinic allows medical students to take the lead in assessing patients for gender-affirming care, and following them up longitudinally. The clinic has been very popular among medical students at HMS, leading to the addition of another faculty member to increase capacity. In addition to providing a learning opportunity for medical students, this clinic has also meaningfully improved access to care for an underserved community at a time of significant uncertainty for transgender and gender-diverse patients.

Report of Teaching and Education Innovations

- 2014–
Implementation of additional processes for evaluation, mentorship and coaching of endocrinology fellows
- As part of the leadership team of the endocrinology fellowship at BWH, I was in charge of the implementation of several formal structures to help our fellows on their path to becoming leaders in academic endocrinology. I created the structure and processes involved in the Clinical Competency Committee, which reviews trainee performance to identify strengths to build on and areas of weakness to mitigate. As an academically focused program, it was also clear that our fellows needed additional mentoring and coaching; I therefore created the Scholarship Oversight Committee which is a formal committee created for each fellow to help oversee and guide their career development. I have created a variety of policies with the input of multiple stakeholders, including a progressive Parental Leave policy, and policies addressing back-up/coverage and pathways for fellows to safely raise concerns.
- 2016–
Implementation of case-based collaborative learning methodology at HMS
- I was one of the original core faculty members that developed the endocrinology portion of Homeostasis 2, and I remain heavily involved in the updating and teaching of the course. This course was part of the curricular reform at HMS, thus it involved the implementation of case-based collaborative learning (CBCL) as the method of instruction. The endocrinology portion of this course has been getting the highest ratings from students since its inception, and has evolved as further understanding of the CBCL methodology has become available.
- 2017–2019
Revision of the current system of
- Continuing certification – the process of maintaining all the attributes expected of physicians who maintain a board certification in a medicine specialty – is expected of the public, but the process did not meet the need of diplomates. As an active member of the “Continuing Board Certification: Vision for the Future Commission” that was convened by the American Board

continuing board certification	of Medical Specialties (ABMS), I was part of the team that developed the final report from the commission. I was later asked to serve on their task force providing recommendations on remediation pathways for individuals who fail to meet the continuing certification requirements. Based on the Vision Commission report and the work of the task force, ABMS issued new standards for continuing certification in November 2021, with substantial changes to bring increased value both to the public and to diplomates.
2019– Funding of, and creation of, an online program for training in pain management and opioid prescribing	Most states have added training requirements in opioid prescribing and pain management as one approach to address the opioid crisis in the United States. However, such training has often not relied on sound educational principles. I was part of a team that secured an unrestricted educational grant from the Food and Drug Administration’s mandated Risk Evaluation and Mitigation Strategy program (grant awarded to the Massachusetts Medical Society). This provided the opportunity to create an engaging online module featuring more than 60 case-based questions on pain management, safer prescribing of opioid analgesics, and the recognition and treatment of opioid use disorder. I oversaw the development of this module from inception to launch and beyond, including creation of learning objectives, recruitment of editorial team, creation of learning elements, and continuous updates. The impact of this program on opioid prescribing was studied and we found a greater decrease in various opioid prescribing parameters in users of this product compared with a matched group of non-users in Massachusetts. As of Sept 1, 2024, almost 250,000 individual learners have used this module, which is available free of cost at https://knowledgeplus.nejm.org/cme-moc/pain-management-and-opioids-cme/ .
2020 Creation of a Covid-19 vaccine course for clinicians	When Covid-19 vaccines became available, there was an acute need for training of frontline clinicians who would be counseling patients and administering these vaccines. I led a team of content matter experts and educators to create an innovative online training program that used adaptive learning technology to efficiently and effectively teach the key points to understanding the vaccine landscape. The course was made available for six months and had over 8000 users during that period.
2020–2024 Implementing virtual technology into all aspects of the endocrinology fellowship program	With the advent of the Covid-19 pandemic, the endocrinology fellowship program was majorly impacted. In the space of two days, I converted the endocrinology inpatient and outpatient fellow services to become fully virtual. I also led the development of a virtual lecture series for the fellows, and the creation of a virtual elective for medical students at HMS. The latter was one of the few clinical elective opportunities available to HMS students and received very strong feedback. I also advocated nationally for APDEM to recommend a fully virtual recruitment season which they did; I then implemented a virtual recruitment process at BWH. Despite the change in format, the fellowship was able to recruit top candidate and the number of applicants has increased by 30%.
2025– Creation of student-run access clinic for gender-affirming hormone therapy	Worked with student advocates from Harvard Medical School to create the “Medical Outreach for Supportive, Affirming, Inclusive Care (MOSAIC) Access Clinic”, a clinic that achieved its goals of reducing wait times, improving patient experience, and enhancing trainee education in gender-affirming care.

Report of Education of Patients and Service to the Community

No presentations below were sponsored by outside entities

Activities

- 2012 VA Boston Healthcare System, Type 2 diabetes support group
 “New treatments for type 2 diabetes mellitus.” Invited speaker for 1-hour presentation.
- 2022 WWLP-TV 22, Mass Appeal, Springfield, MA
 “Endocrine issues in cancer patients”. Invited guest for interview for a local news and lifestyle program. Available at <https://www.wwlp.com/massappeal/treating-endocrine-side-effects-of-cancer-medications/>.
- 2022 USA Softball, Oklahoma City, OK
 Member, Medical Commission for Transgender and Non-Binary Athlete Participation
- 2023 Aftenposten, Oslo, Norway
 “En «frisk diskusjon»? Eller et forsøk på å bevare et utdatert statlig monopol?” [“A “lively discussion”? Or an attempt at preserving an outdated governmental monopoly?”] Co-author on opinion piece on gender-affirming care for a national newspaper in Norway. Available at <https://www.aftenposten.no/meninger/debatt/i/zEbqzK/en-frisk-diskusjon-eller-et-forsok-paa-aa-bevare-et-utdatert-statlig-monopol>. Available at <https://www.aftenposten.no/meninger/debatt/i/zEbqzK/en-frisk-diskusjon-eller-et-forsok-paa-aa-bevare-et-utdatert-statlig-monopol>.
- 2023 Aftenposten, Oslo, Norway
 “Helsestasjon for kjønn og seksualitet har et kompetent fagmiljø” [“The Health Center for Gender and Sexuality has competent professional staff”] Co-author on opinion piece on gender-affirming care for a national newspaper in Norway. Available at <https://www.aftenposten.no/meninger/debatt/i/y6y4Bg/helsestasjon-for-koenn-og-seksualitet-har-et-kompetent-fagmiljoe>.
- 2023 yahoo!life.
 “What is hormone therapy for transgender people? Experts explain this decades-old treatment”. Quoted expert in an article about gender-affirming hormone treatment. Available at <https://www.yahoo.com/lifestyle/hormone-replacement-therapy-nonbinary-trans-queer-lgbtq-155115597.html>.
- 2023 STAT
 “Primary care physicians are learning how to fill the gaps in gender-affirming medicine”. Interviewed as part of article describing work to expand gender-affirming care to primary care practices. Available at <https://www.statnews.com/2023/08/01/gender-affirming-care-pcp/>.
- 2023 Reuters
 “The bills that ban gender transitions”. Interviewed as part of article describing legislative efforts to limit access to gender-affirming care. Available at <https://www.reuters.com/graphics/USA-HEALTHCARE/TRANS-BILLS/zqvorreyapd/>.
- 2023 Dana-Farber Cancer Institute
 “Reducing Barriers to Cancer Care for LGBTQ+ People”. Interviewed as part of article describing impact of cancer on LGBTQ+ populations and efforts at Dana-Farber to

- mitigate this. Available at [https://dfcionline.org/uploadedFiles/Site_Content/news/publications/IT1%2009-12-23\(1\).pdf](https://dfcionline.org/uploadedFiles/Site_Content/news/publications/IT1%2009-12-23(1).pdf)
- 2024 Klassekampen, Oslo, Norway
 “Går hardt ut mot Rikshospitalet” [The National Hospital is being condemned]. Quoted expert in an article on the delivery of healthcare to transgender people in Norway. Available at <https://klassekampen.no/artikkel/2024-10-25/gar-hardt-ut-mot-rikshospita/G9DR>
- 2024 Klassekampen, Oslo, Norway
 “Faglig uforsvarlighet i pen innpakning” [Indefensible professional practice wrapped up nicely]. Co-author on opinion piece on gender-affirming care for a national newspaper in Norway. Available at <https://klassekampen.no/utgave/2024-11-09/debatt-faglig-uforsvarlighet-i-pen-innpakning>
- 2024 Aftenposten, Oslo, Norway
 “God menneskerettsjournalistikk – en mangelvare” [Quality human rights journalism – in short supply]. Co-author on opinion piece on press coverage of gender-affirming care for a national newspaper in Norway. Available at <https://www.aftenposten.no/meninger/debatt/i/B06AqG/god-menneskerettsjournalistikk-en-mangelvare>
- 2025 Filter Nyheter, Oslo, Norway
 “Leder for nasjonalt transtilbud stilte opp hos arrangør utpekt som LHBTQ-hatgruppe: – Uproblematisk, mener OUS” [Leader for the national transgender service participated in a conference organized by a designated LGBTQ hate group. – Not a problem, states Oslo University Hospital]. Quoted expert on the landscape of organizations offering opinions on transgender health care. Available at <https://filternyheter.no/leder-for-nasjonalt-transtilbud-stilte-opp-hos-arrangor-utpekt-som-lhbtq-hatgruppe-uproblematisk-mener-ous/>
- 2025 TheBodyPro
 “What To Know About Prescribing Gender-Affirming Hormone Therapy With HIV Treatment”. Quoted expert in an article about gender-affirming hormone treatment in people living with HIV. Available at <https://www.thebodypro.com/hiv/gender-affirming-hormone-therapy-hiv-care>.

Educational Material for Patients and the Lay Community

Books, monographs, articles and presentations in media

- 2021 DFCI Blum Resource Center Survivorship Series
 “Common Endocrinology Issues among Cancer Survivors.” Invited speaker for 1-hour webinar.
- 2021 Flame Bearers Podcast: The Women Athletes Carrying Tokyo’s Torch.
 “Caster Semenya”. Expert guest discussing variations in sex/gender.
- 2022 Survivor Journeys Cancer Survivorship 101

“Endocrinology in cancer survivorship”. Invited speaker for 1-hour recorded presentation.

2022 DFCI Blum Resource Center Survivorship Series

“Cancer screening in sexual and gender minorities.” Invited speaker for 1-hour webinar.

Recognition:

2022–2026 Top Doctor Castle Connolly / Boston Magazine

2023–2025 Top LGBTQ+ Doctor Castle Connolly

Report of Scholarship

ORCID ID: 0000-0002-3600-2628

Peer-Reviewed Scholarship in print or other media:

Research Investigations

1. Crowley RK, **Hamnvik OPR**, O’Sullivan EP, Behan LA, Smith D, Agha A, Thompson CJ. Morbidity and mortality in craniopharyngioma patients after surgery. *Clin Endocrinol (Oxf)*. 2010 Oct; 73(4):516-21.
2. **Hamnvik OPR**, Liu X, Petrou M, Gong H, Chamberland JP, Kim EH, Christophi CA, Kales SN, Christiani DC, Mantzoros CS. Soluble leptin receptor and leptin are associated with baseline adiposity and metabolic risk factors, and predict adiposity, metabolic syndrome, and glucose levels at 2-year follow-up: the Cyprus Metabolism Prospective Cohort Study. *Metabolism*. 2011 Jul;60(7):987-93.
3. Baur DM, Klotsche J, **Hamnvik OPR**, Sievers C, Pieper L, Wittchen HU, Stalla GK, Schmid RM, Kales SN, Mantzoros CS. Type 2 diabetes mellitus and medications for type 2 diabetes mellitus are associated with risk for and mortality from cancer in a German primary care cohort. *Metabolism*. 2011 Oct;60(10):1363-71.
4. Liu X, **Hamnvik OPR**, Petrou M, Gong H, Chamberland JP, Christophi CA, Kales SN, Christiani DC, Mantzoros CS. Circulating lipocalin 2 is associated with body fat distribution at baseline but is not an independent predictor of insulin resistance: the prospective Cyprus Metabolism Study. *Eur J Endocrinol*. 2011 Nov;165(5):805-12.
5. Foo JP, Aronis KN, Chamberland JP, Thakkar B, **Hamnvik OPR**, Brinkoetter M, Zaichenko L, Mantzoros CS. Gender dimorphism and lack of day/night variation or effects of energy deprivation on undercarboxylated osteocalcin levels in humans. *Obesity (Silver Spring)*. 2013 Dec;21(12):E527-32.
6. Liu X, **Hamnvik OPR**, Chamberland JP, Petrou M, Gong H, Christophi CA, Christiani DC, Kales SN, Mantzoros CS. Circulating alanine transaminase (ALT) and γ -glutamyl transferase (GGT), but not fetuin-A, are associated with metabolic risk factors, at baseline and at two-year follow-up: The prospective Cyprus Metabolism Study. *Metabolism*. 2014 Jun;63(6):773-82.

7. **Hamnvik OPR**, Choueiri TK, Turchin A, McKay RR, Goyal L, Davis M, Kaymakcalan MD, Williams JS. Clinical risk factors for the development of hypertension in patients treated with inhibitors of the VEGF signaling pathway. *Cancer*. 2015 Jan;121(2):311-9.
8. **Hamnvik OPR**, Thakkar B, Chamberland J, Aronis K, Schneider B, Mantzoros CS. Omentin-1 levels are reduced by pharmacologic doses of leptin, but remain unaffected by energy deprivation and display no day-night variation. *Int J Obes (Lond)*. 2015 Feb;39(2):260-4.
9. McKay RR, Rodriguez GE, Lin X, Kaymakcalan MD, **Hamnvik OPR**, Sabbisetti VS, Bhatt RS, Simantov R, Choueiri TK. Angiotensin system inhibitors and survival outcomes in patients with metastatic renal cell carcinoma. *Clin Cancer Res*. 2015 Jun;21(11):2471-9.
10. Liu X, Huh JY, Gong H, Chamberland J, Brinkoetter M, **Hamnvik OPR**, Mantzoros CS. Lack of mature lymphocytes results in obese but metabolically healthy mice when fed a high-fat diet. *Int J Obes (Lond)*. 2015 Oct;39(10):1548-57.
11. Sun M, Choueiri TK, **Hamnvik OPR**, Preston MA, De Velasco G, Jiang W, Loeb S, Nguyen PL, Trinh QD. Comparison of gonadotropin-releasing hormone agonists and orchiectomy: Effects of androgen-deprivation therapy. *JAMA Oncol*. 2016 Apr 1;2(4):500-7.
12. Vamvini MT, **Hamnvik OPR**, Sahin-Efe A, Gavrieli A, Dincer F, Farr OM, Mantzoros CS. Differential effects of oral and intravenous lipid administration on key molecules related to energy homeostasis. *J Clin Endocrinol Metab*. 2016 May;101(5):1989-97.
13. Liu X, Perakakis N, Gong H, Chamberland JP, Brinkoetter MT, **Hamnvik OPR**, Mantzoros CS. Adiponectin administration prevents weight gain and glycemic profile changes in diet-induced obese immune deficient Rag1^{-/-} mice lacking mature lymphocytes. *Metabolism*. 2016 Dec;65(12):1720-30.
14. Lechner MG, Vyas CM, **Hamnvik OPR**, Alexander EK, Larsen PR, Choueiri TK, Angell TE. Risk factors for new hypothyroidism during tyrosine kinase inhibitor therapy in advanced nonthyroidal cancer patients. *Thyroid*. 2018 Apr;28(4):437-44.
15. Lechner MG, Vyas CM, **Hamnvik OPR**, Alexander EK, Larsen PR, Choueiri TK, Angell TE. Hypothyroidism during tyrosine kinase inhibitor therapy is associated with longer survival in patients with advanced nonthyroidal cancers. *Thyroid*. 2018 Apr;28(4):445-53.
16. Healy M, Petrusa E, Axelsson C, Wongsirimeteekul P, **Hamnvik OPR**, O'Rourke M, Feinstein R, Steeves R, Phitayakorn R. An exploratory study of a novel adaptive e-Learning Board Review product helping candidates prepare for certification examinations. *MedEdPublish*. 2018;7(3):24. DOI: <https://doi.org/10.15694/mep.2018.0000162.1>
17. Healy MG, Traeger LN, Axelson CGS, Wongsirimeteekul P, **Hamnvik OPR**, Ryan CT, Akresh-Gonzales J, O'Rourke M, Phitayakorn R. NEJM Knowledge+ Question of the Week: A novel virtual learning community effectively utilizing an online discussion forum. *Med Teach*. 2019 Nov;41(11):1270-6.
18. Blair RA*, Caton JB*, **Hamnvik OPR**. A flipped classroom in graduate medical education. *Clin Teach*. 2020 Mar;17(2):195-9.
19. Foer D, Rubins DM, Almazan A, Chan K, Bates DW, **Hamnvik OPR**. Challenges with accuracy of gender fields in identifying transgender patients in electronic health records. *J Gen Intern Med*. 2020 Dec;35(12):3724-5.

20. Foer D, Rubins DM, Almazan A, Wickner PG, Bates DW, **Hamnvik OPR**. Gender reference use in spirometry for transgender patients. *Ann Am Thorac Soc*. 2021 Mar;18(3):537-40. [research letter]
21. Cheung YMM, **Hamnvik OPR**. Teriparatide in individuals with a prior history of radiation therapy – a case series. *Arch Osteoporos*. 2021 Oct 4;16(1):149.
22. Cheung YMM, Wang W, MacGregor B, **Hamnvik OPR**. Associations between immune-related thyroid dysfunction and efficacy of immune checkpoint inhibitors: A systematic review and meta-analysis. *Cancer Immunol Immunother*. 2022 Aug;71(8):1795-812.
23. Nassar AH, El Zarif T, Khalid AB, Rahme S, Zhong C, Kwak L, Salame M, Farhat EB, Freeman D, El-Am E, Ravishankar A, Ahmad B, Nana FA, Kaldas D, Naqash AR, Sharon E, LeBoeuf NR, Cortellini A, Malgeri A, Gupta S, Al-Hader A, Sparks JA, Linnoila J, **Hamnvik OPR**, Mouhieddine TH, Marron T, Parikh K, McKay RR, Dilling T, Choueiri TK, Adib E, Najem E, Kim SY, Sonpavde G. Clinical outcomes and safety of immune checkpoint inhibitors in patients with solid tumors and paraneoplastic syndromes. *J Immunother Cancer*. 2024 Mar 5;12(3):e008724.
24. Rothman MS, Ariel D, Kelley C, **Hamnvik OPR**, Abramowitz J, Irwig MS, Soe K, Davidge-Pitts C, Misakian AL, Safer JD, Iwamoto SJ. The Use of Injectable Estradiol in Transgender and Gender Diverse Adults: A Scoping Review of Dose and Serum Estradiol Levels. *Endocr Pract*. 2024 Sep;30(9):870-878.
25. Misakian AL, Kelley CE, Sullivan EA, Chang JJ, Singh G, Kokosa S, Avila J, Cooper H, Liang JW, Botzheim B, Quint M, Jeevananthan A, Chi E, Harmer M, Hiatt L, Kowalewski M, Steinberg B, Tausinga T, Tanner H, Ho TF, Mark B, Zenger B, Hu S, Gebregzabheir A, Penny JM, Loeb DF, Strickland T, Iwamoto SJ, Rothman MS, **Hamnvik OPR**, Ariel D. Injectable Estradiol Use in Transgender and Gender-Diverse Individuals in the U.S.: A Multicenter Retrospective Study. *J Clin Endocrinol Metab*. 2025 Aug 7;110(9):e2898-e2907.
26. Misakian AL, Ariel D, Sullivan EA, Singh G, Loeb D, Strickland T, Iwamoto SJ, Rothman MS, Botzheim B, Liang JW, Kelley C*, **Hamnvik OPR***. Injectable estradiol monotherapy effectively suppresses testosterone in gender-affirming hormone therapy. *Endocr Pract*. 2025 Nov;31(11):1462-1469.
27. Chopra RR, Patel K, Rosner BA, Rocha TC, Duran-Mendicuti AM, Loftus JC, Savage-Borne J, Kourabas L, **Hamnvik OPR**, Khurana B. Comparing radiologically evident injuries among cisgender and transgender women. *Inj Prev*. 2025 Sep 9:ip-2025-045731. doi: 10.1136/ip-2025-045731. Epub ahead of print. PMID: 40930587.

Other peer-reviewed publications

1. Ní Áinle F, **Hamnvik OPR**, Gulmann C, Bermingham C, Kelly J, McEvoy P, Murphy P. Diffuse large B-cell lymphoma with isolated bone marrow involvement presenting with secondary cold agglutinin disease. *Int J Lab Hematol*. 2008 Oct; 30(5):444-5.
2. **Hamnvik OPR**, McMahon GT. Balancing risk and benefit with oral hypoglycemic drugs. *Mt Sinai J Med*. 2009 Jun; 76(3):234-43.
3. **Hamnvik OPR**, McMahon GT. Glycemic targets for patients with type 2 diabetes mellitus. *Mt Sinai J Med*. 2009 Jun; 76(3):227-33.

4. Mohammad AF, Ambrose N, **Hamnvik OPR**, Kearns G. Meticillin-sensitive Staphylococcus aureus costochondritis in a healthy man. *Nat Rev Rheumatol*. 2009 Dec;5(12):708-10.
5. **Hamnvik OPR**, Laury AR, Laws ER Jr, Kaiser UB. Lymphocytic hypophysitis with diabetes insipidus in a young man. *Nat Rev Endocrinol*. 2010 Aug;6(8):464-70.
6. Mantzoros CS, Magkos F, Brinkoetter M, Sienkiewicz E, Dardeno TA, Kim SY, **Hamnvik OPR**, Koniaris A. Leptin in human physiology and pathophysiology. *Am J Physiol Endocrinol Metab*. 2011 Oct;301(4):E567-84.
7. **Hamnvik OPR**, Larsen PR, Marqusee E. Thyroid dysfunction from antineoplastic agents. *J Natl Cancer Inst*. 2011 Nov;103(21):1572-87.
Hamnvik OPR, Larsen PR, Marqusee E. Response: Re: Thyroid Dysfunction from Antineoplastic Agents. *J Natl Cancer Inst*. 2012 Mar 7;104(5):423.
8. Foo JP, **Hamnvik OPR**, Mantzoros CS. Optimizing bone health in anorexia nervosa and hypothalamic amenorrhea: new trials and tribulations. *Metabolism*. 2012 Jul;61(7):899-905.
9. Khan SM, **Hamnvik OPR**, Brinkoetter M, Mantzoros CS. Leptin as a modulator of neuroendocrine function in humans. *Yonsei Med J*. 2012 Jul;53(4):671-9.
10. Moon HS, Dalamaga M, Kim SY, Polyzos SA, **Hamnvik OPR**, Magkos F, Paruthi J, Mantzoros CS. Leptin's role in lipodystrophic and nonlipodystrophic insulin-resistant and diabetic individuals. *Endocr Rev*. 2013 Jun;34(3):377-412.
11. **Hamnvik OPR**, Becker CB, Levy B, Loscalzo J. Clinical problem solving: Wasting away. *N Engl J Med*. 2014 Mar 6;370(10):959-66.
12. **Hamnvik OPR**, Vaidya A, Becker CB. Interactive medical case: Wasting away. *N Engl J Med*. 2014 Feb 13;370(7):e12.
13. **Hamnvik OPR**, Saldana F, Levy B, Loscalzo J. Clinical problem solving: Against the grain. *N Engl J Med*. 2014 Oct 2;371(14):1333-8.
14. Rabin AR, **Hamnvik OPR**, Robinson ES, Miller AL, Loscalzo J. Clinical problem solving: Springing a leak. *N Engl J Med*. 2015 Oct;373(14):1362-7.
15. Aherne J, **Hamnvik OPR**, Barrow J, Nunn J. Incorporating oral health as part of routine diabetes care in Ireland. *Ir Med J*. 2017 Dec 18;110(10):660.
16. Park ESY, Rabinowits G, **Hamnvik OPR**, Dagi LR. A case of Graves' ophthalmopathy associated with pembrolizumab (Keytruda) therapy. *J AAPOS*. 2018 Aug;22(4):310-12.
17. Rosen HN, **Hamnvik OPR**, Jaisamrarn U, Malabanan AO, Safer JD, Tangpricha V, Wattanachanya L, Yeap SS. Bone densitometry in transgender and gender non-conforming individuals (TGNC): 2019 ISCD official position. *J Clin Densitom*. 2019;22(4):544-53.
18. Cetlin M, Fulda ES, Chu SM, **Hamnvik OPR**, Poteat T, Zanni MV, Toribio M. Cardiovascular Disease Risk Among Transgender People with HIV. *Curr HIV/AIDS Rep*. 2021 Oct;18(5):407-23.
19. **Hamnvik OPR**, Agarwal S, AhnAllen CG, Goldman AL, Reisner SL. Telemedicine and inequities in health care access: The example of transgender health. *Transgend Health*. 2022 Apr 11;7(2):113-16.

20. Cheung YM, McDonnell M, **Hamnvik OPR**. A targeted approach to phosphoinositide-3-kinase/Akt/mammalian target of rapamycin-induced hyperglycemia. *Curr Probl Cancer*. 2022 Feb;46(1):100776.
21. Cheung YM, **Hamnvik OPR**. Lessons learned from establishing an oncoendocrinology clinic. *Endocr Pract*. 2022 Jan;28(1):118-21.
22. Cheung YM, Morgans A, **Hamnvik OPR**. Bone health and denosumab discontinuation in oncology populations. *Oncologist*. 2022 Dec 9;27(12):998-1003.
23. Cheung YM, **Hamnvik OPR**, Shariff A, Gallagher E. Dearth of ICD Codes for Complications of Immune Checkpoint Inhibitors Impedes Clinical Care and Research. *J Endocr Soc*. 2023;7(4):bvad019. Chosen for the Endocrine Society Thematic Issue on Immuno-endocrinology 2023.
24. Hodan R., Rodgers-Fouche L., Chittenden A, Dominguez-Valentin M, Ferriss J, Gima L, **Hamnvik OPR**, Idos GE, Kline K, Koeller DR, Long JM, McKenna D, Muller C, Thoman M, Wintner A, Bedrick BS. Cancer surveillance for transgender and gender diverse patients with Lynch syndrome: a practice resource of the Collaborative Group of the Americas on Inherited Gastrointestinal Cancer. *FamilialFam Cancer*. 2023. Published online ahead of print <https://doi.org/10.1007/s10689-023-00341-1> Oct;22(4):437-448.
25. Rothman MS, **Hamnvik OPR**, Davidge-Pitts C, Safer JD, Ariel D, Tangpricha V, Abramowitz J, Soe K, Sarvaideo J, Kelley C, Irwig MS, Iwamoto SJ. Revisiting Injectable Estrogen Dosing Recommendations for Gender-Affirming Hormone Therapy. *Transgend Health*. 2024 Dec 16;9(6):463-465.
26. Zhu L, Hshieh TT, Iyer TK, Morgans AK, **Hamnvik OPR**. Management of vasomotor symptoms in cancer patients. *Oncologist*. 2025 Feb 6;30(2):oyaf002. doi: 10.1093/oncolo/oyaf002. PMID: 40037618.
27. **Hamnvik OPR**, Vaidya A, Siegel J, Irwig MS. A Smooth Transition. *N Engl J Med*. 2025 Mar 13;392(11):e30. doi: 10.1056/NEJMimc2404250. PMID: 40073313.
28. Berner AM, MacKenzie TM, Kulkarni S, Chong C, Schechter L, Michie C, **Hamnvik OPR**. Breast cancer in a transgender man. *CA Cancer J Clin*. 2025 Sep-Oct;75(5):376-386.
29. Zhu L, Cheung YM, Chiang C, Gallagher EJ, **Hamnvik OPR**, Mammen J, Quandt Z, Jones R, McDunn J, Al-Bahadili H, Angell T, Bancos I, Betof Warner A, Blackwell S, Calabrese C, Cho TA, Dougan M, Ferreira M, Funchain P, Herndon J, Johnson DB, Kennedy R, Kheterpal M, Khouri M, Lechner MG, Lim AM, Markova A, Meara A, Overton L, Perdigoto AL, Sachithanandan N, Sharon E, Spain L, Tsai K, Yarchoan M, Reynolds KL, Shariff A. Consensus-based disease definitions for endocrine immune-related adverse events of immune checkpoint inhibitors. *J Immunother Cancer*. 2025 Oct 15;13(10):e011865.

Non-peer reviewed scientific or medical publications in print or other media:

Reviews, chapters, monographs and editorials

1. **Hamnvik OPR**. Thyroid complications of cancer therapy – an increasing challenge. *AACE Clin Case Rep*. 2016 Summer;2(3):e272-3.

2. **Hamnvik OPR**, Alford DP, Ryan CT, Hardesty IT, Drazen JM. NEJM Knowledge+ Pain Management and Opioids — A new adaptive learning module. N Engl J Med. 2019 Apr 18;380(16):1576-7
3. **Hamnvik OPR**. Adrenalectomy for non-secreting adenoma or adenocarcinoma. In: Garg RK, Garber JR, Hennessey JV, Malabanan AO, editors. Handbook of Inpatient Endocrinology. Cham, Switzerland: Springer; 2020. p. 230-237.
4. Goldman AL, **Hamnvik OPR**. Integrated Care of the Transgender and Gender Non-Binary Person. In: Bhasin S, O'Leary M, Basaria S, editors. Essentials of Men's Health. New York: McGraw-Hill; 2021. p. 309-324.
5. **Hamnvik OPR**. Adrenalectomy for non-secreting adenoma or adenocarcinoma. In: Garg RK, Garber JR, Hennessey JV, editors. Handbook of Inpatient Endocrinology, 2nd ed. Cham, Switzerland: Springer; 2024. In press.

Letters to the Editor

1. **Hamnvik OPR**, Dizon DS, Leone AG. Methodology Concerns Regarding Claims Data Studies in Transgender Health. JAMA Oncol. 2025 Mar 6. doi: 10.1001/jamaoncol.2025.0020. Online ahead of print.

Other non-peer reviewed scholarship

1. **Hamnvik OPR**, Løvdaal L. (2024). Helsehjelp til mindreårige pasienter med kjønnsinkongruens: Juridiske og medisinske perspektiver [Healthcare for minors with gender incongruence: Legal and medical perspectives]. Available at https://egalia.org/wp-content/uploads/2024/10/Rapport_kjonnsinkongruens.pdf.

Professional educational materials or reports, in print or other media:

1. **Hamnvik OPR**. (2006). The endocrine intern. In The new intern's guide to Beaumont Hospital. Information book for new interns starting at Beaumont Hospital
2. **Hamnvik OPR**. (2010). Faulkner Hospital. In Kostas T, Brim N (Eds.), Internal Medicine Resident Handbook 2010-2011. Boston, MA: BWH. Information book for new interns starting at BWH
3. **Hamnvik OPR**. (2011). Prolonged suppression of the renin-angiotensin-aldosterone system after treatment of hyperaldosteronism. New England chapter of American Academy of Clinical Endocrinologists Clinical case of the month for March 2011.

Educational case for endocrine fellows and attendings in the New England region
4. **Hamnvik OPR**, Alexander EK. (2013). Thyroid nodule evaluation. In Gopalakrishnan G, Laufgraben MJ (Eds.), Tarascon Endocrinology Pocketbook. Burlington, MA: Tarascon Publishing.

Chapter in pocket textbook aimed at endocrine fellows nationally.
5. Becker C, Tirosh A, **Hamnvik OPR**, Min L, Rosenquist K, Vaidya A, Woodmansee WW, Chamarthi B, Kim M. Endocrinology. In: Singh A, Loscalzo J, editors. Brigham Intensive Review of Internal Medicine Q&A Companion, 1st ed. New York: Oxford University Press; 2014. p.101-124. Question

contributor to the endocrine section of this book aimed at Internal Medicine physicians sitting their initial or recertification board exam.

6. **Hamnvik OPR.** (2014). NEJM Knowledge+. Authored 34 questions in Endocrinology and 1 question in Gastroenterology for comprehensive lifelong learning product from NEJM Group aimed at trainees at all levels; used nationally and internationally.

Available at <http://knowledgeplus.nejm.org/>

7. **Hamnvik OPR.** (2015). Genetic and genomic influence on disease. In Alexander EK (Ed.), Scientific American Medicine: Internal Medicine Clerkship Guide. Hamilton, ON: Decker Publishing.

Chapter in online textbook aimed at medical students nationwide.

8. **Hamnvik OPR.** (2015). Inappropriate or ineffective immune response. In Alexander EK (Ed.), Scientific American Medicine: Internal Medicine Clerkship Guide. Hamilton, ON: Decker Publishing. Chapter in online textbook aimed at medical students nationwide.

9. **Hamnvik OPR.** (2015). Hyperglycemic emergencies simulation cases. Developed two teaching cases that are used annually for BWH endocrinology fellows in the BWH Center for Medical Simulation.

10. **Hamnvik OPR, Cohen D, Vaidya A.** (2016). Clinical Problems 3. Developed a problem set used in HMS course IN757.ER, Endocrine and Reproductive Pathophysiology (2nd year medical students)

11. **Hamnvik OPR.** (2016). Concepts in pituitary physiology and pathophysiology. Developed 4 concept videos used in Homeostasis II, a required course for 1st year HMS students and by medical students at the University of Global Health Equity in Rwanda.

12. **Hamnvik OPR.** (2016). Concepts in glucose physiology and diabetes pathophysiology. Developed 6 concept videos used in Homeostasis II, a required course for 1st year HMS students and by medical students at the University of Global Health Equity in Rwanda.

13. **Hamnvik OPR, Wassner AJ, Cohen DA, Wolfsdorf J, Kaiser UB, Vaidya A.** (2016). Student guide: Introduction to endocrinology. Wrote the introductory endocrinology syllabus on used in Homeostasis II, a required course for 1st year HMS students.

14. **Hamnvik OPR, Wassner AJ, Cohen DA, Wolfsdorf J, Kaiser UB, Vaidya A.** (2016). Student guide: The pituitary gland. Wrote the syllabus on the topic of the pituitary gland used in Homeostasis II, a required course for 1st year HMS students.

15. **Wassner AJ, Huang S, Cohen DA, Hamnvik OPR, Vaidya A.** (2016). Student guide: The thyroid gland. Co-wrote the syllabus on the topic of the thyroid gland used in Homeostasis II, a required course for 1st year HMS students.

16. **Vaidya A, Wassner AJ, Cohen DA, Hamnvik OPR.** (2016). Student guide: Adrenal physiology and pathophysiology. Co-wrote the syllabus on the topic of the adrenal gland used in Homeostasis II, a required course for 1st year HMS students.

17. **Hamnvik OPR, Cohen DA, Wassner AJ, Vaidya A.** (2016). Student guide: The endocrine pancreas. Wrote the syllabus on the topic of the pancreatic hormones and diabetes used in Homeostasis II, a required course for 1st year HMS students.

18. Cohen DA, **Hamnvik OPR**, Wassner AJ, Vaidya A. (2016). Student guide: Complications of diabetes. Co-wrote the syllabus on the topic of complications of diabetes used in Homeostasis II, a required course for 1st year HMS students.
19. Cohen DA, **Hamnvik OPR**, Wassner AJ, Vaidya A. (2016). Student guide: Calcium and phosphate metabolism; PTH and vitamin D. Co-wrote the syllabus on the topic of calcium and phosphate metabolism used in Homeostasis II, a required course for 1st year HMS students.
20. Wassner AJ, Huang S, Cohen DA, **Hamnvik OPR**, Vaidya A. (2016). Student guide: Growth and sexual development. Co-wrote the syllabus on the topic of growth and sexual development used in Homeostasis II, a required course for 1st year HMS students.
21. Vaidya A, Cohen DA, Wassner AJ, **Hamnvik OPR**. (2016). Problem set: Principles of endocrinology. Developed cases used to teach basic concepts in endocrinology in Homeostasis II, a required course for 1st year HMS students.
22. **Hamnvik OPR**, Wassner AJ, Cohen DA, Vaidya A. (2016). Problem set: Pituitary pathophysiology. Developed cases used to teach pituitary pathophysiology in Homeostasis II, a required course for 1st year HMS students.
23. Wassner AJ, **Hamnvik OPR**, Cohen DA, Vaidya A. (2016). Problem set: Thyroid physiology and pathophysiology. Co-developed cases used to teach thyroid physiology and pathophysiology in Homeostasis II, a required course for 1st year HMS students.
24. Vaidya A, **Hamnvik OPR**, Cohen DA, Wassner AJ. (2016). Problem set: Adrenal physiology and pathophysiology. Co-developed cases used to teach adrenal physiology and pathophysiology in Homeostasis II, a required course for 1st year HMS students.
25. **Hamnvik OPR**, Cohen DA, Wassner AJ, Vaidya A. (2016). Problem set: Diabetes mellitus. Developed cases used to teach the pathophysiology of diabetes in Homeostasis II, a required course for 1st year HMS students.
26. Cohen DA, **Hamnvik OPR**, Wassner AJ, Vaidya A. (2016). Problem set: Diabetes complications. Co-developed cases used to teach about diabetes complications in Homeostasis II, a required course for 1st year HMS students.
27. Cohen DA, **Hamnvik OPR**, Wassner AJ, Vaidya A. (2016). Problem set: Calcium and bone. Co-developed cases used to teach about calcium and bone physiology and pathophysiology in Homeostasis II, a required course for 1st year HMS students.
28. Wassner AJ, **Hamnvik OPR**, Cohen DA, Vaidya A. (2016). Problem set: Reproductive physiology and pathophysiology. Co-developed cases used to teach reproductive physiology and pathophysiology in Homeostasis II, a required course for 1st year HMS students.
29. Cohen DA, **Hamnvik OPR**, Wassner AJ, Vaidya A. (2016). Critical thinking lab: Osteoporosis. Co-developed cases used to teach osteoporosis evaluation and management in Homeostasis II, a required course for 1st year HMS students.
30. **Hamnvik OPR**, Cohen DA, Wassner AJ, Vaidya A. (2016). Applied diabetes management lab. Developed practical teaching session on diabetes management and technologies used in Homeostasis II, a required course for 1st year HMS students.

31. **Hamnvik OPR**. Endocrinology. In: Singh A, Hammond SP, Loscalzo J, editors. Brigham Intensive Review of Internal Medicine Q&A Companion, 2nd ed. Philadelphia: Elsevier; 2017. p. 104-128. Wrote the questions for the endocrine section of this book aimed at Internal Medicine physicians sitting their initial or recertification board exam.
32. Ramaswami R, **Hamnvik OPR**, Elmer-DeWitt M, Margolin S, Simmons L. Patient Communication Rotation Prep. NEJM Resident360. Available at https://resident360.nejm.org/pages/home?resource_collection_id=19&subtopic=introduction (accessed 11/4/2021)
33. **Hamnvik OPR**. Why Endocrinology. The Logical Choice. Endocrine News April 2017. Available at <http://endocrinenews.endocrine.org/endocrinology-logical-choice/> (accessed 11/4/2021).
34. Expert faculty, NEJM Resident360 discussion forums “Prepping for PGY1: What You Need to Know Before Starting Residency” (91,758 views as of 11/8/2021), “Ask the Experts: Your Endocrinology Questions Answered!” (22,436 views as of 11/8/2021), and “Applying to Fellowship...What Do I Need to Know?” (30,388 views as of 11/8/2021). Available at <https://resident360.nejm.org/discussions?list=past> (accessed 11/4/2021)
35. Akresh-Gonzalez J, **Hamnvik OPR**. APDIM Conference Q&A with Education Editor Dr. Ole-Petter Riksfjord Hamnvik. Available at <https://knowledgeplus.nejm.org/blog/apdim-conference-qa-with-education-editor-dr-ole-petter-riksfjord-hamnvik/> (235 views as of 11/8/2021, accessed 11/4/2021).
36. **Hamnvik OPR**. Should Patients with Type 2 Diabetes Take Aspirin to Prevent Stroke and Coronary Events? NEJM Knowledge+ Blog. Available at <https://knowledgeplus.nejm.org/blog/patients-type-2-diabetes-take-aspirin-prevent-stroke-coronary-events/> (23,188 views as of 11/8/2021, accessed 11/4/2021).
37. **Hamnvik OPR**. Fellows’ Training Series at Endo 2017. Available at <https://youtu.be/zbKuTNmzPrg> (accessed 11/4/2021).
38. **Hamnvik OPR**. Applying for Fellowship: What you Need to Know. Resident 360 Expert Consult. Available at https://resident360.nejm.org/content_items/applying-for-fellowship-what-you-need-to-know/ (24,536 views as of 11/8/2021, accessed 11/4/2021).
39. Chang LS, Cohen DA, Vaidya A, **Hamnvik OPR**, Wassner A. (2018). Student guide: Obesity. Co-wrote the syllabus on the topic of obesity used in Homeostasis II, a required course for 1st year HMS students.
40. Chang LS, Cohen DA, Vaidya A, **Hamnvik OPR**, Wassner A. (2018). Problem set: Obesity. Developed cases used to teach the pathophysiology of obesity in Homeostasis II, a required course for 1st year HMS students.
41. NEJM Knowledge+ (2019). Pain Management and Opioids. Available at <https://knowledgeplus.nejm.org/cme-moc/pain-management-and-opioids-cme/>. Online module featuring more than 60 case-based questions on pain management, safer prescribing of opioid analgesics, and the recognition and treatment of opioid use disorder. I oversaw the development of this module from inception to launch and beyond, including creation of learning objectives, recruitment of editorial team, creation of learning elements, and continuous updates. As of Sept 1, 2024, almost 250,000 individual learners have used this module.

42. **Hamnvik OPR.** (2018). How Do You Approach a Patient with Suspected Bacterial Meningitis? NEJM Knowledge+ Blog. Available at <https://knowledgeplus.nejm.org/blog/suspected-bacterial-meningitis/> (4,786 views as of 11/8/2021, accessed 11/4/2021).
43. Gender-Affirming Hormone Therapy for Transgender Individuals (2018). Endocrine Society Fellows Training Series. Available at education.endocrine.org (accessed 11/4/2021).
44. **Hamnvik OPR.** (2019). Applying for Residency as an International Medical Graduate. NEJM Knowledge+ Blog. Available at https://resident360.nejm.org/content_items/applying-for-residency-as-an-international-medical-graduate/ (63,524 views as of 11/8/2021, accessed 11/4/2021).
45. **Hamnvik OPR.** (2019). Scoring the USMLE – Where to next? NEJM Knowledge+ Blog. Available at <https://knowledgeplus.nejm.org/blog/scoring-the-usmle-where-to-next/> (2,176 views as of 11/8/2021, accessed 11/4/2021).
46. Continuing Board Certification: Vision for the Future Commission. Final Report (2019). Available at https://www.abms.org/wp-content/uploads/2020/11/commission_final_report_20190212.pdf.
47. NEJM Knowledge+ (2021). Covid-19 Vaccine Training: What Every Clinician Needs to Know. Online adaptive learning module teaching over 50 learning objectives around Covid-19 vaccines. I oversaw the development of this module from inception to launch and beyond, including creation of learning objectives, recruitment of editorial team, creation of learning elements, and continuous updates. The program had greater than 8000 active users between January and June 2021.
48. **Hamnvik OPR.** (2021). American Academy of Clinical Endocrinology Self-Assessment Program (ASAP). Authored 4 questions in the Female and Male Reproduction section of this product, aimed at helping to prepare trainees and endocrinologists for board certification, recertification, or ongoing assessment. Available at <https://pro.aace.com/educational-opportunities/aace-self-assessment-program-asap-2021> (accessed 11/4/2021).
49. Bikas A, **Hamnvik OPR** (2024). Endocrinology. In: Singh A, Hammond SP, Loscalzo J, editors. Brigham Intensive Review of Internal Medicine Q&A Companion, 4th ed. Philadelphia: Elsevier; 2024. Wrote the questions for the endocrine section of this book aimed at Internal Medicine physicians sitting their initial or recertification board exam.
50. **Hamnvik OPR** (2024). Management and Treatment of Obesity in Primary Care: An Evolving Landscape CME Series. Directed 3-module series with NEJM on management of obesity in primary care, accessed by nearly 10,000 learners during the 12 months that it was active.

Local/Unpublished Clinical Guidelines and Reports:

1. [Unnamed authorship] “Feminiserende hormoner til personer med kjønnsinkongruens”. [Feminizing hormones to individuals with gender incongruence]. Guideline issued by Oslo Municipal Health Center for Gender and Sexuality.
2. [Unnamed authorship] “Maskuliniserende hormoner til personer med kjønnsinkongruens”. [Masculinizing hormones to individuals with gender incongruence]. Guideline issued by Oslo Municipal Health Center for Gender and Sexuality.

3. **Hamnvik OPR**, Min L. "Approach to the Evaluation and Management of Checkpoint Inhibitor Endocrine Toxicity" (2018). Guideline created for the DFCI Immunotherapy Toxicity Management Program.

4. [Unnamed authorship] World Professional Association for Transgender Health – Standards of Care version 8, Norwegian adaptation (2023). Led the efforts to translate and adapt the standards of care for implementation in the Norwegian setting. Available at https://www.wpath.org/media/cms/Documents/SOC%20v8/Translations/SOC8%20Norwegian%20May%202016%202023_clean.pdf

Thesis:

Hamnvik OPR. Novel regulators of blood pressure. The role of omentin-1 and VEGF-A. Harvard Medical School, May 2014.

Abstracts, Presentations and Exhibits Presented at Professional Meetings:

1. Blair RA, Caton JB, **Hamnvik OPR**. Implementing the Flipped Classroom into Graduate Medical Education: Feasibility and Effectiveness. Oral presentation, 2019 Innovations in Medical Education Conference, Los Angeles, CA, March 2019.

2. Healy M, Petrusa E, Noronha C, Axelsson CGS, **Hamnvik OPR**, Elmore M, Marchwinski L, O'Rourke M, Phitayakorn R. Measuring metacognitive skills: Pilot results from a study involving internal medicine residents. Poster, AMEE 2019, Vienna, Austria, August 2019.

3. Foer D, Rubins DM, Bates DW, Almazan AN, Wickner PG, **Hamnvik OPR**. Spirometry use for transgender patients. Oral presentation, American College of Allergy, Asthma & Immunology Annual Meeting, Houston, TX, November 2019.

4. McGregor BA, Wang XV, **Hamnvik OPR**, Cheung YM, Wei XX, Ravi P, Fichorova RN, Sweeney C. Changes in bone turnover markers (BTM) and association with outcomes in patients with metastatic hormone-sensitive prostate cancer (mHSPC) treated with androgen deprivation therapy (ADT) +/- docetaxel (D) in CHAARTED (ECOG-ACRIN E3805). Poster, 2022 American Society of Clinical Oncology (ASCO) Genitourinary Cancers Symposium

5. Misakian AL, Kelley CE, Sullivan EA, Chang JS, Singh G, Jelinek SK, Kokosa S, Avila J, Cooper H, Liang JW, Botzheim B, Quint M, Jeevananthan A, Chi E, Harmer M, Hiatt L, Kowalweski M, Steinberg B, Tausinga T, Tanner H, Ho TH, Mark B, Zenger B, Hu S, Gebregzabheir A, Penny JM, Loeb DF, Strickland T, Iwamoto SJ, Rothman MS, **Hamnvik OPR**, Ariel D. Injectable Estradiol Use In Adult Transgender And Gender Diverse Individuals Throughout The U.S.: A Multisite Retrospective Study. Poster, Endocrine Society Annual Meeting 2024, Boston, MA, June 2024.

6. Misakian AL, Kelley CE, Sullivan EA, Chang JS, Singh G, Jelinek SK, Kokosa S, Avila J, Cooper H, Liang JW, Botzheim B, Quint M, Jeevananthan A, Chi E, Harmer M, Hiatt L, Kowalweski M, Steinberg B, Tausinga T, Tanner H, Ho TH, Mark B, Zenger B, Hu S, Gebregzabheir A, Penny JM, Loeb DF, Strickland T, Iwamoto SJ, Rothman MS, **Hamnvik OPR**, Ariel D. Injectable Estradiol Use In Adult Transgender And Gender Diverse Individuals Throughout The U.S.: A Multisite Retrospective Study. Oral presentation, WPATH 28th Scientific Symposium, Lisbon, Portugal, September 2024.

7. **Hamnvik OPR**, Dizon D, Schechter L. Clinical considerations in the assessment and management of sex-hormone responsive cancers in transgender and gender diverse people. Mini-symposium, WPATH 28th Scientific Symposium, Lisbon, Portugal, September 2024.
8. **Hamnvik OPR**, Irwig MS, Radix A, Siegel J, Streed Jr C. Assessing and addressing cardiovascular health in transgender and gender diverse people & communities. Mini-symposium, WPATH 28th Scientific Symposium, Lisbon, Portugal, September 2024.
9. Misakian AL, Ariel D, Sullivan EA, Singh G, Loeb DF, Strickland T, Iwamoto SJ, Rothman MS, Botzheim B, Liang JW, Kelley CE*, **Hamnvik OPR***. Injectable Estradiol for Gender-Affirming Hormone Therapy Effectively Suppresses Testosterone Concentrations. Poster, Endocrine Society Annual Meeting 2025, San Francisco, CA, July 2025. Winner of Poster Highlight Tour and Competition, Reproductive Endocrinology category.
10. Misakian AL, Ariel D, Sullivan EA, Singh G, Loeb DF, Strickland T, Iwamoto SJ, Rothman MS, Botzheim B, Liang JW, Kelley CE*, **Hamnvik OPR***. Injectable Estradiol for Gender-Affirming Hormone Therapy Effectively Suppresses Testosterone Concentrations. Oral presentation, USPATH 2025 Scientific Symposium, Santa Ana Pueblo, NM, September 2025.
11. Dontu S, Tselovalnikova T, Morais NS, Garber J, Bikas A, **Hamnvik OPR**. A Case of Cushing's Syndrome in the setting of Ectopic Adrenocorticotrophic Hormone Production from Metastasized Small Cell Lung Cancer. Poster, New England Endocrine Alliance Annual Meeting 2025, Westborough, MA, September 2025.