

CLINICAL VIGNETTE

A Case for the Annual Physical: Diagnosing Leukemia During a Routine Checkup

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Introduction

Recent evidence suggests that screenings for breast, colon, and prostate cancers are significantly reducing during the SARS-CoV2 Coronavirus (COVID) pandemic, with breast cancer screening being the most impacted with a 90% reduction in screening rates in 2020 when compared to 2019.¹ The decline in screenings results in less patients being diagnosed in a timely fashion, and cancers diagnosed when they are more progressed, and often more difficult to treat. This does not include other important non-cancer screenings done by primary care doctors. Routine annual physicals, although mandated to be covered by insurance, are not supported by all and there is limited evidence for routine lab work in asymptomatic patients.²⁻⁴ We present an asymptomatic, seemingly healthy middle-aged male, whose annual checkup resulted in a clinically significant cancer diagnosis.

Case Presentation

A 63-year-old male with no significant past medical history presented to an outpatient Internal Medicine clinic to establish care with a primary care doctor and have a routine physical. He had not seen a physician in several years and overall reported feeling well, and felt it was time to re-engage with healthcare. He denied any significant past medical or surgical history and was not taking any medications regularly. He exercised regularly, did not smoke or use recreational drugs, and had minimal alcohol use. Family history was significant for dementia, hyperlipidemia, hypertension, gastric cancer, and breast cancer. He was not current on colon, prostate, and skin cancer screenings. Review of systems was negative for chest pain, shortness of breath, night sweats, fevers, weight loss.

On exam, vitals were unremarkable, including blood pressure of 120/76, pulse of 73, respiratory rate of 16, oxygen saturation of 99%, and a BMI of 24. Exam was notable for diffuse non-tender lymphadenopathy (LAD) in anterior cervical, supraclavicular, and axillary chains. Upon further discussion, he did report some night sweats over the past 6 months or so, without weight loss or fevers.

Complete blood count (CBC) was notable for a white blood cell count of 23,000 with a lymphocytic predominance, hemoglobin of 13, and a lactate dehydrogenase (LDH) of 389, and a Thyroid Stimulating hormone (TSH) of 5.2 with a normal reflex T4, which chronically elevated in the subclinical hypothyroidism

range. HIV, MTB-Quantiferon gold, RPR, hepatitis panel were also negative.

Computed tomography (CT) scans of the chest, abdomen, and pelvis with contrast were significant for extensive bilateral axillary, supraclavicular, mediastinal, internal mammary, paravertebral, and abdominopelvic lymphadenopathy, and splenomegaly. The patient underwent ultrasound (US) guided lymph node biopsy of the left axillary chain. Pathology revealed Small Lymphocytic Leukemia (SLL), he was referred to Oncology for further evaluation and management. The patient is currently undergoing active surveillance for SLL with routine CT scans every 4 months with follow up every 2 months for clinical evaluation. In addition to the above work up, during the annual visit, the patient was referred for colon and skin cancer screenings and had his prostate specific antigen (PSA) checked as well, which was normal.

Discussion

Although evidence suggests limited benefit to annual physicals and “routine” labs, this case helps to demonstrate the importance of a thorough, face-to-face discussion of cancer screenings, and the exam. The patient did not initially report nodal swelling or night sweats. Only after his significant lymphadenopathy was noted on exam, and he was questioned again, did he report night sweats. His physical exam, was paramount to diagnosing his lymphoproliferative process. This diagnosis also helped to facilitate further follow up with primary care, allowing for recommendation for statin therapy for an elevated risk for atherosclerotic cardiovascular disease.

The annual physical is an opportunity for doctors and patients to discuss cancer screenings, weight, exercise, cholesterol, and blood pressure. The American Heart Association recently reported that although COVID became a top cause of death in 2020, cardiovascular disease remains the number one cause of death globally.⁵ With people eating more, drinking more alcohol, and exercising less during the COVID pandemic, they are further increasing their risk of cardiovascular disease.^{6,7} Therefore, the screenings and counseling that doctors do during physicals have never been more crucial.

REFERENCES

1. **Chen RC, Haynes K, Du S, Barron J, Katz AJ.** Association of Cancer Screening Deficit in the United States With the COVID-19 Pandemic. *JAMA Oncol.* 2021 Jun 1;7(6):878-884. doi: 10.1001/jamaoncol.2021.0884. PMID: 33914015; PMCID: PMC8085759.
2. **Darves B.** Rethinking the value of the annual exam. Evidence-Based Medicine, *ACP Internist.* Published online January 2010. Available at: https://www.acpinternist.org/archives/2010/01/annual.htm?_gl=1*19hpcfs*_ga*MTM4MzU1NDA3Ni4xNjYxNTM5NzA3*_ga_PM4F5HBGFQ*MTY2MTUzOTcwNi4xLjEuMTY2MTU0MDIyMy42MC4wLjA.&_ga=2.228305694.2041609629.1661539707-1383554076.1661539707.
3. **Gold J.** Ritual, Not Science, Keeps the Annual Physical Alive. *Kaiser Health News.* Published online April 6, 2015. Available at: <https://khn.org/news/ritual-not-science-keeps-the-annual-physical-alive/>.
4. **Andrews M.** The Case for a 'Check In' Instead of a Checkup. Treatments. *National Public Radio.* Published online November 1, 2011. Available at: <https://www.npr.org/sections/health-shots/2011/11/01/141899172/the-case-for-a-check-in-instead-of-a-checkup>.
5. **Virani SS, Alonso A, Aparicio HJ, Benjamin EJ, Bittencourt MS, Callaway CW, Carson AP, Chamberlain AM, Cheng S, Delling FN, Elkind MSV, Evenson KR, Ferguson JF, Gupta DK, Khan SS, Kissela BM, Knutson KL, Lee CD, Lewis TT, Liu J, Loop MS, Lutsey PL, Ma J, Mackey J, Martin SS, Matchar DB, Mussolino ME, Navaneethan SD, Perak AM, Roth GA, Samad Z, Satou GM, Schroeder EB, Shah SH, Shay CM, Stokes A, VanWagner LB, Wang NY, Tsao CW; American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee.** Heart Disease and Stroke Statistics-2021 Update: A Report From the American Heart Association. *Circulation.* 2021 Feb 23; 143(8):e254-e743. doi: 10.1161/CIR.0000000000000950. Epub 2021 Jan 27. PMID: 33501848.
6. **Zheng C, Huang WY, Sheridan S, Sit CH, Chen XK, Wong SH.** COVID-19 Pandemic Brings a Sedentary Lifestyle in Young Adults: A Cross-Sectional and Longitudinal Study. *Int J Environ Res Public Health.* 2020 Aug 19;17(17):6035. doi: 10.3390/ijerph17176035. PMID: 32825092; PMCID: PMC7503726.
7. **Giacalone D, Frøst MB, Rodríguez-Pérez C.** Reported Changes in Dietary Habits During the COVID-19 Lockdown in the Danish Population: The Danish COVIDiet Study. *Front Nutr.* 2020 Dec 8;7:592112. doi: 10.3389/fnut.2020.592112. PMID: 33364250; PMCID: PMC7752855.