Survivorship – Anal Cancer

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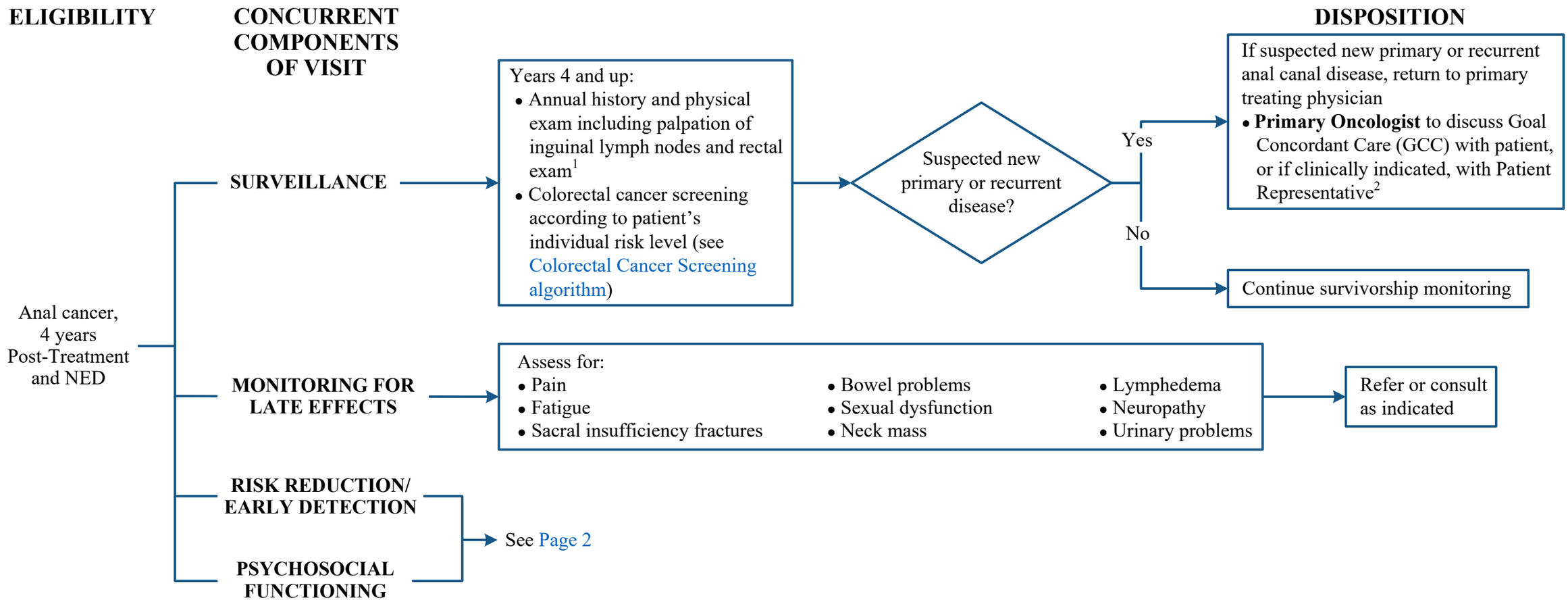

NED = no evidence of disease

[1] Rectal exam to include digital rectal exam (DRE) and visual inspection

[2] GCC should be initiated by the **Primary Oncologist**. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients, or if clinically indicated, the Patient Representative should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion. Refer to GCC home page (for internal use only).

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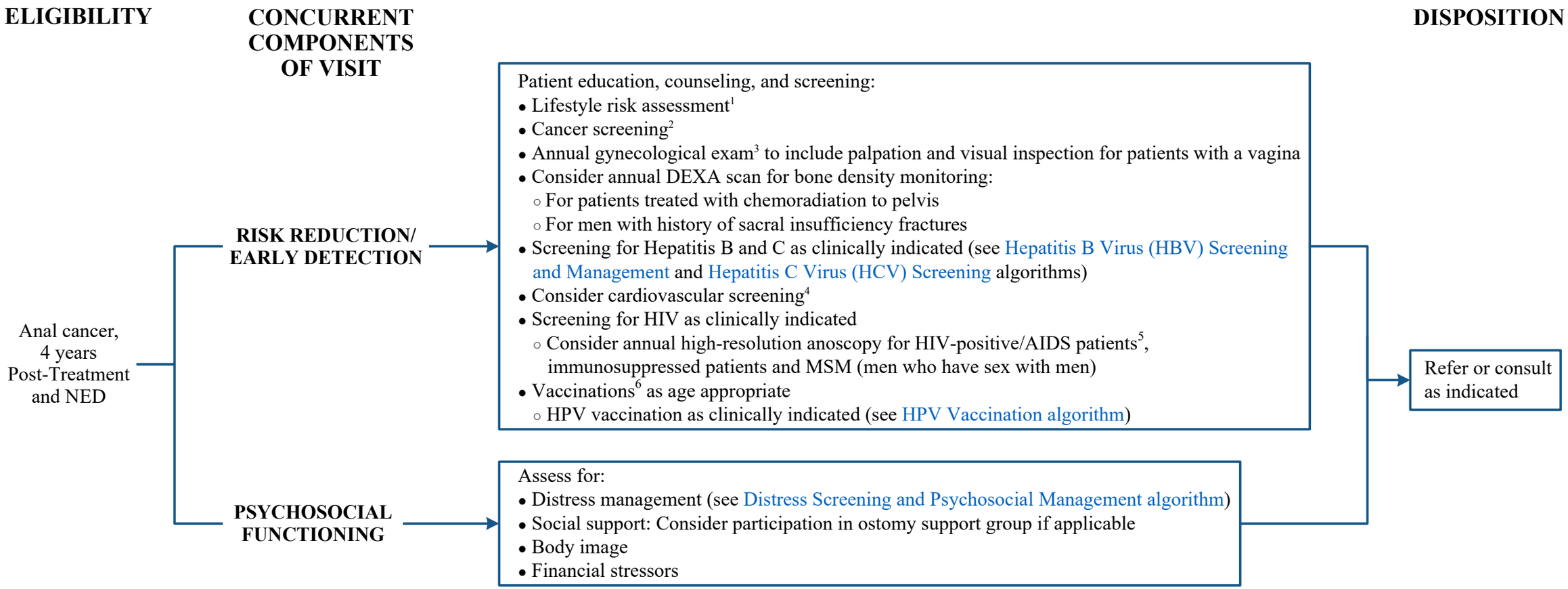

DEXA = dual energy x-ray absorptiometry

[1] See Physical Activity, Nutrition, Obesity Screening and Management and Tobacco Cessation Treatment algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice
[2] Includes breast, cervical, colorectal, liver, lung, pancreatic, prostate and skin cancer screening
[3] Perform Pap smear/HPV test as per guidelines in Cervical Cancer Screening algorithm. For patients with abnormal Pap test or high risk HPV, colposcopy with and/or without Pap smear test as indicated by Gynecologist.
[4] See Survivorship – Adult Cardiovascular Screening algorithm
[5] Consider annual collection of anal cytology in HIV-positive/AIDS patients at the time of high-resolution anoscopy
[6] Based on American Society of Clinical Oncology (ASCO) guidelines

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SUGGESTED READINGS

Badin, S., Iqbal, A., Sikder, M., & Chang, V. T. (2008). Persistent pain in anal cancer survivors. *Journal of Cancer Survivorship*, *2*(2), 79-83. https://doi.org/10.1007/s11764-008-0051-4

Chou, R., Dana, T., Fu, R., Zakher, B., Wagner, J., Ramirez, S., … Jou, J. (2020). Screening for hepatitis C virus infection in adolescents and adults. Updated evidence report and systematic review for the US Preventive Services Task Force. *Journal of American Medical Association*, *323*(10), 976-992. doi:10.1001/jama.2019.20788

Corrigan, K. L., Rooney, M. K., De, B., Ludmir, E. D., Das, P., Smith, G.L., … Holliday, E. B. (2022). Patient-reported sexual function in long-term survivors of anal cancer treated with definitive intensity modulated radiation therapy and concurrent chemotherapy. *Practical Radiation Oncology, 12*(5), e397-e405. doi:10.1016/j.prro.2022.05.006

Das, P., Bhatia, S., Eng, C., Ajani, J. A., Skibber, J. M., Rodriguez-Bigas, M. A., … Crane, C. H. (2007). Predictions and patterns of recurrence after definitive chemoradiation for anal cancer. *International Journal of Radiation Oncology*Biology*Physics, 68*(3), 794-800. doi:10.1016/j.ijrobp.2006.12.052

Eng, C. (2011). Carcinoma of the anal canal: Small steps in treatment advances. *Clinical Advances in Hematology & Oncology*, *9*(9), 662-669. Retrieved from https://www.hematologyandoncology.net/files/2013/09/ho0911_Eng1.pdf

Engstrom, P. F., Arnoletti, J. P., Benson, A. B., Berlin, J. D., Berry, J. M., Chen, Y. J., … Willett, C. (2010). Anal carcinoma. *Journal of the National Comprehensive Cancer Network*, *8*(1), 106-120. doi:10.6004/jnccn.2010.0007

Fakhrian, K., Sauer, T., Schuster, T., Molls, M., & Geinitz, H. (2012). Quality of life outcomes and chronic adverse events after radiotherapy in patients with anal cancer. *Conference paper: 18th Annual Congress of the German-Society-for-Radiation-Oncology in Strahlentherapie und Onkologie, 188*, 16-17. Retrieved from https://www.researchgate.net/publication/294140673_Quality_of_life_outcomes_and_chronic_adverse_events_after_radiotherapy_in_patients_with_anal_cancer

Frederick, W. A. I., Bhayani, N., Ford, D., Yang, G., & Thomas Jr., C. R. (2009). Anal carcinoma. *Current Cancer Therapy Reviews*, *5*(2), 142-150. doi:10.2174/157339409788166751

Glynne-Jones, R., Nilsson, P. J., Aschele, C., Goh, V., Peiffert, D., Cervantes, A., & Arnold, D. (2014). Anal cancer: ESMO–ESSO–ESTRO clinical practice guidelines for diagnosis, treatment and follow-up. *Radiotherapy and Oncology*, *111*(3), 330-339. doi:10.1016/j.radonc.2014.04.013

Glynne-Jones, R., Northover, J. M. A., & Cervantes, A. (2010). Anal cancer: ESMO clinical practice guidelines for diagnosis, treatment and follow-up. *Annals of Oncology*, *21*(5), v87-v92. doi:10.1093/annonc/mdq171

Holliday, E. B., Morris, V. K., Johnson, B., Eng, C., Ludmir, E. B., Das, P., … Messick, C. A. (2022). Definitive intensity-modulated chemoradiation for anal squamous cell carcinoma: Outcomes and toxicity of 428 patients treated at a single institution. *The Oncologist, 27*(1). 40-47. doi:10.1093/oncolo/oyab006

Kamboj, M., Bohlke, K., Baptiste, D. M., Dunleavy, K., Fueger, A., Jones, A. L., … Kohn, E. C. (2024). Vaccination of Adults With Cancer: ASCO Guideline. *Journal of Clinical Oncology, 42*(14), 1699-1721. doi:10.1200/JCO.24.00032

LeFevre, M. L. (2014). Screening for hepatitis B virus infection in nonpregnant adolescents and adults: US Preventive Services Task Force recommendation statement. *Annals of Internal Medicine*, *161*(1), 58-66. doi:10.7326/M14-1018

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SUGGESTED READINGS - continued

Mai, S. K., Welzel, G., Hermann, B., Bohrer, M., & Wenz, F. (2008). Long-term outcome after combined radiochemotherapy for anal cancer–retrospective analysis of efficacy, prognostic factors, and toxicity. *Onkologie*, *31*, 251-257. doi:10.1159/000121362

McCarty, H., Wong, R., Cummings, B., Gilhooly, K., & Levin, W. (2009). Dyspareunia after chemoradiation (chemo-RT) for anal carcinoma - an under reported complication [Abstract]. *Radiotherapy and Oncology, 92*(2), S20. doi:10.1016/S0167-8140(12)72450-7

MD Anderson Institutional Policy #CLN1202 - Advance Care Planning Policy
Advance Care Planning (ACP) Conversation Workflow (ATT1925)

Meyer, J. E., Panico, V. J., Marconato, H. M., Sherr, D. L., Christos, P., & Pirog, E. C. (2013). HIV positivity but not HPV/p16 status is associated with higher recurrence rate in anal cancer. *Journal of Gastrointestinal Cancer*, *44*(4), 450-455. doi:10.1007/s12029-013-9543-1

National Comprehensive Cancer Network. (2023). *Anal Carcinoma* (NCCN Guideline Version 1.2024). Retrieved from https://www.nccn.org/professionals/physician_gls/pdf/anal.pdf

Oblak, I., Petric, P., Anderluh, F., Velenik, V., & Fras, P. (2012). Long term outcome after combined modality treatment for anal cancer. *Radiology and Oncology*, *46*(2), 145-152. doi:10.2478/v10019-012-0022-2

Philip, E. J., Nelson, C., Temple, L., Carter, J., Schover, L., Jennings, S., … DuHamel, K. (2013). Psychological correlates of sexual dysfunction in female rectal and anal cancer survivors: Analysis of baseline intervention data. *The Journal of Sexual Medicine*, *10*(10), 2539-2548. doi:10.1111/jsm.12152

Tomaszewski, J. M., Link, E., Leong, T., Heriot, A., Vazquez, M., Chander, S., … Ngan, S. (2012). Twenty-five-year experience with radical chemoradiation for anal cancer. *International Journal of Radiation Oncology*Biology*Physics*, *83*(2), 552-558. doi:10.1016/j.ijrobp.2011.07.007

US Preventative Services Task Force. (2019). Screening for HIV infection. US Preventive Services Task Force recommendation statement. *Journal of American Medical Association*, *321*(23), 2326-2336. doi:10.1001/jama.2019.6587

Young, S. C., Solomon, M. J., Hruby, G., & Frizelle, F. A. (2009). Review of 120 anal cancer patients. *Colorectal Disease*, *11*(9), 909-914. doi:10.1111/j.1463-1318.2008.01723.x

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DEVELOPMENT CREDITS

This survivorship algorithm is based on majority expert opinion of the Anal Survivorship workgroup at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

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