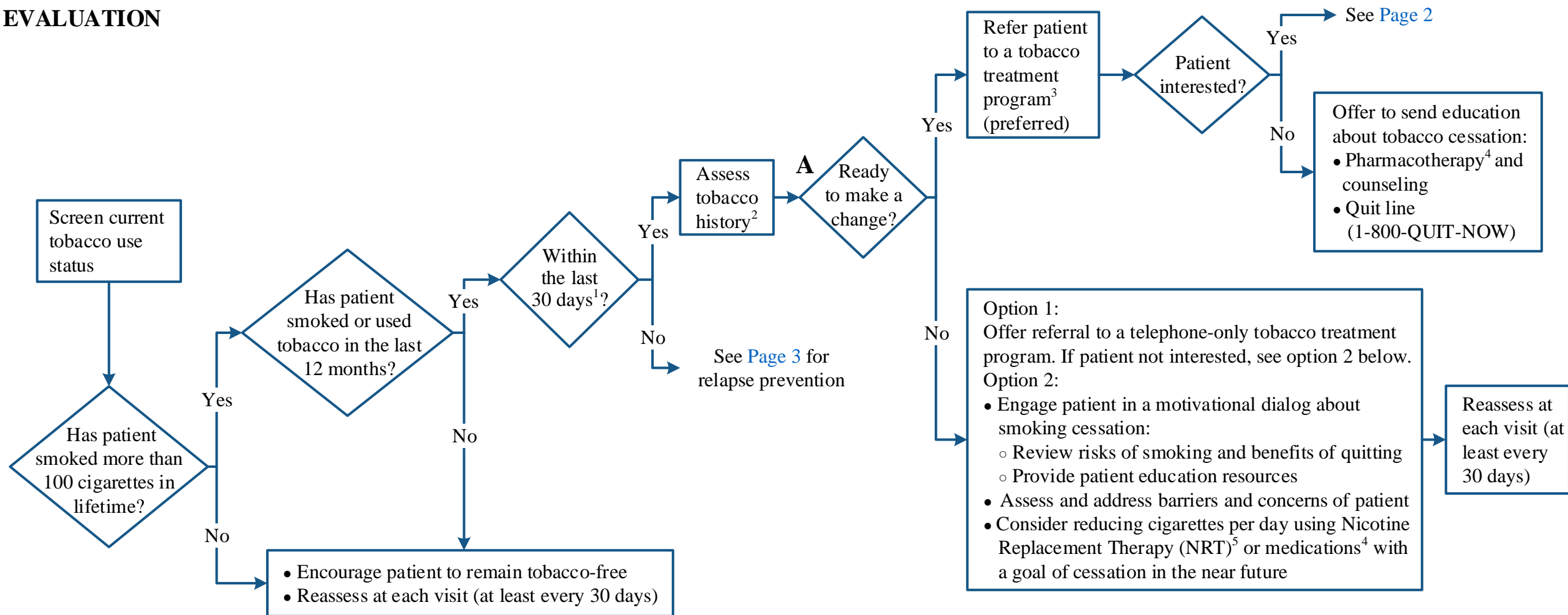


Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.

INITIAL EVALUATION

STATUS

MANAGEMENT



¹ If patient has not smoked in the past 7 days, treatment may not be required

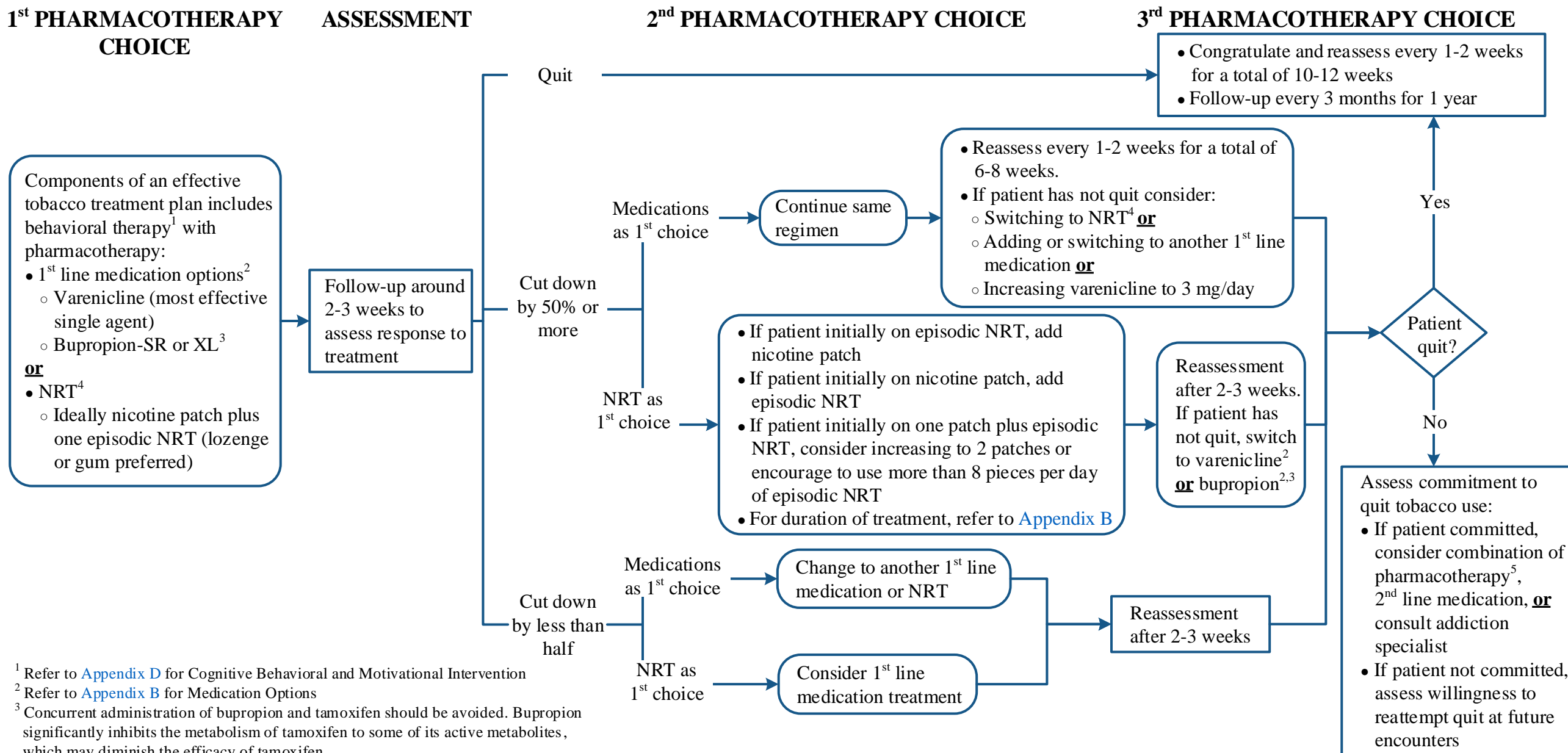
² Refer to [Appendix A](#) for Tobacco History Assessment

³ The tobacco treatment program provides both outpatient and inpatient services

⁴ Refer to [Appendix B](#) for Medication Options

⁵ Refer to [Appendix C](#) for Nicotine Replacement Therapy (NRT)

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.



¹ Refer to [Appendix D](#) for Cognitive Behavioral and Motivational Intervention

² Refer to [Appendix B](#) for Medication Options

³ Concurrent administration of bupropion and tamoxifen should be avoided. Bupropion significantly inhibits the metabolism of tamoxifen to some of its active metabolites, which may diminish the efficacy of tamoxifen.

⁴ Refer to [Appendix C](#) for Nicotine Replacement Therapy (NRT)

⁵ Two 1st line medications or one medication plus NRT

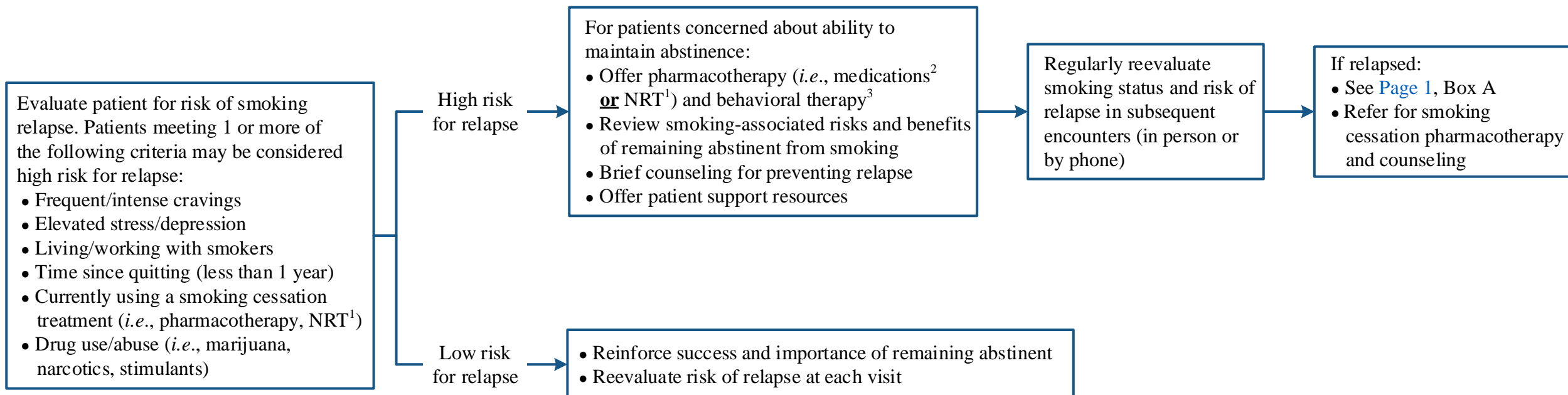
Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.

RELAPSE EVALUATION

STATUS

MANAGEMENT

RE-EVALUATION



¹ Refer to [Appendix C](#) for Nicotine Replacement Therapy (NRT)

² Refer to [Appendix B](#) for Medication Options

³ Refer to [Appendix D](#) for Cognitive Behavioral and Motivational Intervention

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.

APPENDIX A: Tobacco History Assessment

- **How much do you smoke per day?**
If greater than 20 cigarettes, see footnote¹
- **How soon do you smoke after you wake up in the morning?**
If within 30 minutes, see footnote¹
- **Do you use any other type(s) of tobacco/nicotine products and if so, how much?** (e.g., pipes, cigars, snuff, and/or e-cigarettes)
- **Do you use tobacco everyday or some days?**
If daily, see footnote¹
- **Fagerstrom Test of Nicotine Dependence (FTND)** (optional):
If they score 3 or higher indicates dependence on nicotine

Document history of quit attempts in patient health record:

- What is the longest period you have gone without smoking?
- When was your last quit attempt?
- Did you use anything to help you quit in the past? If so, what?
 - Unaided
 - Medications
 - Support group
 - Behavior therapy
 - Quitlines, websites, smart phone applications, or other media
 - E-cigarettes
 - Other
- **Why were previous quit attempts unsuccessful?**
(e.g., side effects, cost, continued cravings, did not work)
- **Engage patients in a motivational dialog about smoking cessation:**
 - Review risks of smoking and benefits of quitting
 - Provide patient education resources

¹ Patient has a higher likelihood of being nicotine dependent and more difficult to quit

APPENDIX B: Medication Options

- Varenicline (Chantix[®]) for 12 weeks; if patient quits, then renew another 12 weeks
 - 0.5 mg for three days, then
 - 0.5 mg twice a day for 4 days, then
 - 1 mg twice a day
- Bupropion-SR² (Zyban[®]) for 12 weeks; if patient quits, then renew another 12 weeks
 - 150 mg daily for 3-7 days, then
 - 150 mg twice a day **or** bupropion-XL² 150 mg every morning for 3-7 days, then 300 mg every morning

² Bupropion inhibits the metabolism of tamoxifen diminishing the availability of active tamoxifen metabolites and therefore tamoxifen becomes ineffective in preventing recurrence of certain breast cancers (HR+ types)

APPENDIX C: Nicotine Replacement Therapy³ (NRT)

Nicotine patch:

- If greater than 5 cigarettes per day or smokes within 30 minutes of awaking:
 - 21 mg daily for 6 weeks or more
 - 14 mg daily for 2 weeks or more
 - 7 mg daily for 2 weeks or more
 - If patient quits, either stop or taper to next lower level. Minimum of 12 weeks, recommended up to 24 weeks.
 - If less than 5 cigarettes per day or smokes after at least 30 minutes of awaking
 - 14 mg daily for 6 weeks or more
 - 7 mg daily for 2 weeks or more
 - If patient quits, either stop or taper to 7 mg. Use for a minimum of 12 weeks; recommended for up to 24 weeks.
- Episodic NRT:** (Dosing minimum of 8 doses/day; maximum 20 doses/day. One dose every 1-2 hour(s) as needed for 12 weeks or more.)
- Gum or lozenges: 2 mg or 4 mg/piece (4 mg is preferred due to favorable cost, effectiveness and ease of use)
 - Nasal spray: 2 squirts (1 mg) equals 1 dose (not preferred due to higher cost and difficulty of use)
 - Oral inhaler: 10 mg/cartridge (20 puffs equal 1 dose) (not preferred due to higher cost and difficulty of use)

³ Continuous use of NRT: There is no standard timeframe beyond 12 weeks; it is based on individual preference

Disclaimer: *This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.*

APPENDIX D: Cognitive Behavioral and Motivational Intervention

| Type of Counseling | Interventions |
|-----------------------------------|--|
| Inpatient/Outpatient and by Phone | <ul style="list-style-type: none"> • Negotiate quit date, a trial quit attempt or a scheduled reduction • Support cessation and build abstinence skills • Review educational handouts • Explore social support • Problem solving • Discuss medication options¹ • Assessment of motivation and readiness to quit • Relapse prevention |
| Related Interventions | <ul style="list-style-type: none"> • Explore psychiatric symptoms • Cancer related distress: <ul style="list-style-type: none"> ◦ Internal resources: Place of Wellness, Palliative Care, Integrative Medicine ◦ External resources: Cancer Counseling Incorporated, help locate community resources ◦ Consultation: <ul style="list-style-type: none"> - Psychiatrist-physician - APN/PA |

¹ Refer to [Appendix B](#) for Medication Options

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.

SUGGESTED READINGS

- Anthenelli, R., Benowitz, N., West, R., St Aubin, L., Mcrae, T., Lawrence, D., . . . Evins, A. (2016). Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): A double-blind, randomised, placebo-controlled clinical trial. *The Lancet*, 387(10037), 2507–2520. [https://doi.org/10.1016/S0140-6736\(16\)30272-0](https://doi.org/10.1016/S0140-6736(16)30272-0)
- Cahill, K., Stevens, S., Perera, R., & Lancaster, T. (2013). Pharmacological interventions for smoking cessation: An overview and network meta-analysis. *Cochrane Database of Systematic Reviews*, 5(5), CD009329. <https://doi:10.1002/14651858.CD009329.pub2>
- Fiore, M., Jaen, C., Baker, T., Bailey, W., Benowitz, N., Curry, S., . . . 2008 PHS Guideline Update Panel, Liaisons, and Staff. (2008). Treating tobacco use and dependence: 2008 update U.S. public health service clinical practice guideline executive summary. *Respiratory Care*, 53(9), 1217-1222. Retrieved from <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=1&sid=8248ba44-7634-4859-aa5e-039c01c2807a%40sessionmgr4008>
- Heatherton, T. F., Kozlowski, L. T., Frecker, R. C., Fagerstrom, K. (1991). The fagerström test for nicotine dependence: A revision of the fagerstrom tolerance questionnaire. *British Journal of Addiction*, 86(9), 1119-1127. <https://doi.org/10.1111/j.1360-0443.1991.tb01879.x>
- Karam-Hage, M., Cinciripini, P., & Gritz, E. (2014). Tobacco use and cessation for cancer survivors: An overview for clinicians. *CA: A Cancer Journal for Clinicians*, 64(4), 272-290. <https://doi.org/10.3322/caac.21231>
- Karam-Hage, M., Oughli, H., Rabius, V., Beneventi, D., Wippold, R., Blalock, J., & Cinciripini, P. (2016). Tobacco cessation treatment pathways for patients with cancer: 10 years in the making. *Journal of the National Comprehensive Cancer Network*, 14(11), 1469-1477. <https://doi.org/10.6004/jnccn.2016.0153>
- Mills, E. J., Wu, P., Lockhart, I., Thorlund, K., Puhan, M., & Ebbert, J. O. (2012). Comparisons of high-dose and combination nicotine replacement therapy, varenicline, and bupropion for smoking cessation: A systematic review and multiple treatment meta-analysis. *Annals of Medicine*, 44(6), 588-597. <https://doi:10.3109/07853890.2012.705016>
- National Comprehensive Cancer Network. (2019). *Smoking Cessation* (NCCN Guideline Version 2.2019). Retrieved from https://www.nccn.org/professionals/physician_gls/pdf/smoking.pdf.
- Rose, J. E., & Behm, F. M. (2013). Adapting smoking cessation treatment according to initial response to precessation nicotine patch. *American Journal of Psychiatry*, 170(8), 860-867. <https://doi.org/10.1176/appi.ajp.2013.12070919>
- Wippold, R., Karam-Hage, M., Blalock, J., & Cinciripini, P. (2015). Selection of optimal tobacco cessation medication treatment in patients with cancer. *Clinical Journal of Oncology Nursing*, 19(2), 170-175. <https://doi.org/10.1188/15.CJON.170-175>

Disclaimer: *This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.*

DEVELOPMENT CREDITS

This screening algorithm is based on majority expert opinion of the Tobacco Cessation work group at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

Diane Beneventi, PhD (Behavioral Science – Clinical)
Therese Bevers, MD (Clinical Cancer Prevention)[‡]
Jan Blalock, PhD (Behavioral Science)
Paul Cinciripini, PhD, MS (Behavioral Science)
Mark Evans, MSW, LCSW (Behavioral Science)
Danielle Underferth, MS (Community Relations)
Wendy Garcia, BS[♦]

Ernest Hawk, MD (Cancer Prevention & Popular Science)
Nancy Huang, MA, LPC (Behavioral Science)
Maher Karam-Hage, MD (Behavioral Science – Clinical)[‡]
Sheila Kitaka, PAC (Behavioral Science – Clinical)
Melissa Macomber, MA, LPC (Behavioral Science)
James Staley, MA, LPC (Behavioral Science)
Leann Witmer, MA, LPC-S (Behavioral Science)

[‡] Core Development Team

[♦] Clinical Effectiveness Development Team