Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL GUIDELINE CLEARINGHOUSE

General

Guideline Title

Peyronie's disease: AUA guideline.

Bibliographic Source(s)

Nehra A, Alterowitz R, Culkin DJ, Faraday MM, Hakim LS, Heidelbaugh JJ, Khera M, McVary KT, Miner MM, Nelson CJ, Sadeghi-Nejad H, Seftel AD, Shindel AW, Burnett AL. Peyronie's disease: AUA guideline. Linthicum (MD): American Urological Association Education and Research, Inc.; 2015 Apr. 41 p. [307 references]

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Definitions for the body of evidence strength (Grade A, B, or C), the strength of the recommendations (Strong, Moderate, Conditional), and for statements labeled as Clinical Principle and Expert Opinion are provided at the end of the "Major Recommendations" field.

Diagnosis

1. Clinicians should engage in a diagnostic process to document the signs and symptoms that characterize Peyronie's disease (PD). The minimum requirements for this examination are a careful history (to assess penile deformity, interference with intercourse, penile pain, and/or distress) and a physical exam of the genitalia (to assess for palpable abnormalities of the penis). (*Clinical Principle*)
2. Clinicians should perform an in-office intracavernosal injection (ICI) test with or without duplex Doppler ultrasound prior to invasive intervention. (*Expert Opinion*)
3. The evaluation and treatment of a man with PD should be undertaken by a clinician who has the experience and expertise in the appropriate evaluation, counseling, and management of this condition and treatment complications. (*Expert Opinion*)

Treatment

4. Clinicians should discuss with patients the available treatment options and the known benefits and risks/burdens associated with each treatment. (*Clinical Principle*)
5. Clinicians may offer oral non-steroidal anti-inflammatory medications to the patient suffering from active PD who is in need of pain management. (*Expert Opinion*)
6. Clinicians should not offer oral therapy with vitamin E, tamoxifen, procarbazine, omega-3 fatty acids, or a combination of vitamin E with L-

carnitine. (*Moderate Recommendation; Evidence Strength Grade B* [vitamin E/omega-3 fatty acids/vitamin E + propionyl-L-carnitine]/ C [tamoxifen/procarbazine])

7. Clinicians should not offer electromotive therapy with verapamil. (*Moderate Recommendation; Evidence Strength Grade C*)
8. Clinicians may administer intralesional collagenase clostridium histolyticum in combination with modeling by the clinician and by the patient for the reduction of penile curvature in patients with stable PD, penile curvature >30° and <90°, and intact erectile function (with or without the use of medications). (*Moderate Recommendation; Evidence Strength Grade B*)
9. Clinicians should counsel patients with PD prior to beginning treatment with intralesional collagenase regarding potential occurrence of adverse events (AEs), including penile ecchymosis, swelling, pain, and corporal rupture. (*Clinical Principle*)
10. Clinicians may administer intralesional interferon α-2b in patients with PD. (*Moderate Recommendation; Evidence Strength Grade C*)
11. Clinicians should counsel patients with PD prior to beginning treatment with intralesional interferon α-2b about potential AEs, including sinusitis, flu-like symptoms, and minor penile swelling. (*Clinical Principle*)
12. Clinicians may offer intralesional verapamil for the treatment of patients with PD. (*Conditional Recommendation; Evidence Strength Grade C*)
13. Clinicians should counsel patients with PD prior to beginning treatment with intralesional verapamil about potential AEs, including penile bruising, dizziness, nausea, and pain at the injection site. (*Clinical Principle*)
14. Clinicians should not use extracorporeal shock wave therapy (ESWT) for the reduction of penile curvature or plaque size. (*Moderate Recommendation; Evidence Strength Grade B*)
15. Clinicians may offer ESWT to improve penile pain. (*Conditional Recommendation; Evidence Strength Grade B*)
16. Clinicians should not use radiotherapy (RT) to treat PD. (*Moderate Recommendation; Evidence Strength Grade C*)
17. Clinicians should assess patients as candidates for surgical reconstruction based on the presence of stable disease. (*Clinical Principle*)
18. Clinicians may offer tunical plication surgery to patients whose rigidity is adequate for coitus (with or without pharmacotherapy and/or vacuum device therapy) to improve penile curvature. (*Moderate Recommendation; Evidence Strength Grade C*)
19. Clinicians may offer plaque incision or excision and/or grafting to patients with deformities whose rigidity is adequate for coitus (with or without pharmacotherapy and/or vacuum device therapy) to improve penile curvature. (*Moderate Recommendation; Evidence Strength Grade C*)
20. Clinicians may offer penile prosthesis surgery to patients with PD with erectile dysfunction (ED) and/or penile deformity sufficient to prevent coitus despite pharmacotherapy and/or vacuum device therapy. (*Moderate Recommendation; Evidence Strength Grade C*)
21. Clinicians may perform adjunctive intra-operative procedures, such as modeling, plication or incision/grafting, when significant penile deformity persists after insertion of the penile prosthesis. (*Moderate Recommendation; Evidence Strength Grade C*)
22. Clinicians should use inflatable penile prosthesis for patients undergoing penile prosthetic surgery for the treatment of PD. (*Expert Opinion*)

Definitions

Body of Evidence Strength

Grade A: Well-conducted and highly-generalizable randomized controlled trials (RCTs) or exceptionally strong observational studies with consistent findings

Grade B: RCTs with some weaknesses of procedure or generalizability or moderately strong observational studies with consistent findings

Grade C: RCTs with serious deficiencies of procedure or generalizability or extremely small sample sizes or observational studies that are inconsistent, have small sample sizes, or have other problems that potentially confound interpretation of data

Note: By definition, Grade A evidence is evidence about which the Panel has a high level of certainty, Grade B evidence is evidence about which the Panel has a moderate level of certainty, and Grade C evidence is evidence about which the Panel has a low level of certainty.

American Urological Association (AUA) Nomenclature Linking Statement Type to Level of Certainty, Magnitude of Benefit or Risk/Burden, and Body of Evidence Strength

	Evidence Strength A (High Certainty)	**Evidence Strength B (Moderate Certainty)**	**Evidence Strength C (Low Certainty)**
Strong Recommendation (Net benefit or harm substantial)	Benefits > Risks/Burdens (or vice versa) Net benefit (or net harm) is substantial Applies to most patients in most	Benefits > Risks/Burdens (or vice versa) Net benefit (or net harm) is substantial Applies to most patients in most	Benefits > Risks/Burdens (or vice versa) Net benefit (or net harm) is substantial Applies to most patients in most circumstances but better evidence is likely to change confidence (rarely used to support a Strong

	Evidence Strength A (High Certainty)	Evidence Strength B (Moderate Certainty)	Evidence Strength C (Low Certainty)
Moderate Recommendation (Net benefit or harm moderate)	Benefits > Risks/Burdens (or vice versa) Net benefit (or net harm) is moderate Applies to most patients in most circumstances and future research is unlikely to change confidence	Benefits > Risks/Burdens (or vice versa) Net benefit (or net harm) is moderate Applies to most patients in most circumstances and future research is unlikely to change confidence	Benefits > Risks/Burdens (or vice versa) Net benefit (or net harm) appears moderate Applies to most patients in most circumstances and future research is unlikely to change confidence
Conditional Recommendation (No apparent net benefit or harm)	Benefits = Risks/Burdens Best action depends on individual patient circumstances Future research unlikely to change confidence	Benefits = Risks/Burdens Best action depends on individual patient circumstances Better evidence could change confidence	Balance between Benefits & Risks/Burdens unclear Alternative strategies may be equally reasonable Better evidence likely to change confidence
Clinical Principle	A statement about a component of clinical care that is widely agreed upon by urologists or other clinicians for which there may or may not be evidence in the medical literature		
Expert Opinion	A statement, achieved by consensus of the Panel, that is based on members' clinical training, experience, knowledge, and judgment for which there is no evidence		

Clinical Algorithm(s)

A clinical algorithm is available from the American Urological Association Education and Research, Inc. (AUA) Web site .

Scope

Disease/Condition(s)

Peyronie's disease (PD)

Guideline Category

Diagnosis

Evaluation

Treatment

Clinical Specialty

Surgery

Urology

Intended Users

Patients

Physician Assistants

Physicians

Guideline Objective(s)

- To provide a clinical framework for the diagnosis and treatment of Peyronie's disease (PD)
- To provide direction to clinicians and patients regarding how to recognize PD, conduct a valid diagnostic process, and approach treatment with the goals of maximizing symptom control, sexual function, and patient and partner quality of life (QoL) while minimizing adverse events (AEs) and patient and partner burden

Target Population

Adult males with Peyronie's disease (PD)

Interventions and Practices Considered

Diagnosis

1. Documentation of signs and symptoms, including history and physical exam
2. In-office intracavernosal injection (ICI) test
3. Consideration of clinician experience and expertise to appropriately evaluate, counsel, and treat the condition

Treatment

1. Counseling of patients on available treatments and their benefits/risks
2. Oral non-steroidal anti-inflammatory drugs for pain
3. Intralesional collagenase clostridium histolyticum with modeling
4. Intralesional interferon α-2b
5. Intralesional verapamil
6. Extracorporeal shock wave therapy (ESWT) for pain
7. Assessment of patient as a candidate for surgical reconstruction
8. Tunical plication surgery
9. Plaque incision or excision and/or grafting for patient deformities
10. Penile prosthesis surgery with erectile dysfunction (ED)
11. Adjunctive intra-operative procedures
12. Inflatable penile prosthesis for patients undergoing surgery

Note: The following interventions considered but not recommended:

- Oral therapy with vitamin E, tamoxifen, procarbazine, omega-3 fatty acids, or a combination of vitamin E with L-carnitine
- Electromotive therapy with verapamil
- ESWT for curvature or plaque size
- Radiotherapy

Major Outcomes Considered

- Incidence and rate of deformity
- Penile pain
- Plaque size
- Sexual dysfunction

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Systematic Review

A systematic review was conducted to identify published articles relevant to the diagnosis and treatment of Peyronie's disease (PD). Literature searches were performed on English-language publications using the PubMed, EMBASE, and Cochrane databases from 1/1/1965 to 1/26/2015. Data from studies published after the literature search cut-off will be incorporated into the next version of this guideline. Preclinical studies (e.g., animal models), commentary, and editorials were excluded. Additional exclusion criteria were as follows: patients constituted a mixed group among which most patients had congenital curvature rather than PD, and outcomes were collapsed across groups; article focused primarily on surgical technique with minimal or no patient information or outcomes reported; no outcomes reported or outcomes data not extractable; or duplicate report of data presented elsewhere. Review article references were checked to ensure inclusion of all possibly relevant studies. Multiple reports on the same patient group were carefully examined to ensure inclusion of only non-redundant information.

Number of Source Documents

The systematic review yielded a total of 303 publications relevant to preparation of the guideline. The review revealed insufficient publications to address Peyronie's disease (PD) diagnosis from an evidence basis. With regard to treatment, a total of 281 articles met the inclusion criteria.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Body of Evidence Strength

Grade A: Well-conducted and highly-generalizable randomized controlled trials (RCTs) or exceptionally strong observational studies with consistent findings

Grade B: RCTs with some weaknesses of procedure or generalizability or moderately strong observational studies with consistent findings

Grade C: RCTs with serious deficiencies of procedure or generalizability or extremely small sample sizes or observational studies that are inconsistent, have small sample sizes, or have other problems that potentially confound interpretation of data

Note: By definition, Grade A evidence is evidence about which the Panel has a high level of certainty, Grade B evidence is evidence about which the Panel has a moderate level of certainty, and Grade C evidence is evidence about which the Panel has a low level of certainty.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Data Extraction

Data extraction for each study was performed by the methodologist using a standard template in a statistical spreadsheet. All key outcomes data were verified against the full-text article after the completion of extraction.

Data Synthesis

A qualitative synthesis was performed of all studies. This synthesis is presented in the systematic review in text, tabular, and graphical formats and focuses on understanding study and patient characteristics that may be relevant to interpret outcomes.

Quality of Individual Studies and Determination of Evidence Strength

The quality of individual studies that were either randomized controlled trials (RCTs) or controlled clinical trials (CCTs) was assessed using the Cochrane Risk of Bias tool. The quality of case-control studies and comparative observational studies was rated using the Newcastle-Ottawa Quality (NOQ) Assessment Scale. Because there is no widely-agreed upon quality assessment tool for single cohort observational studies, the quality of these studies was not assessed.

The categorization of evidence strength is conceptually distinct from the quality of individual studies. Evidence strength refers to the body of evidence available for a particular question and includes not only individual study quality but consideration of study design, consistency of findings across studies, adequacy of sample sizes, and generalizability of samples, settings, and treatments for the purposes of the guideline. (See the "Rating Scheme for the Strength of Evidence" field.)

Limitations of the Literature

The Panel proceeded with full awareness of the limitations of the Peyronie's disease (PD) literature. Some of these limitations derive from the fact that PD is characterized by symptoms that change over time and by some symptoms that may resolve in the absence of treatment (i.e., Berookhim 2014; Grasso 2007; Mulhall 2006). The changing nature of PD symptoms and the possibility that improvement in some patients may be a consequence of the passage of time makes the study of treatment effects challenging. Some symptoms, such as pain, are highly susceptible to placebo effects. These characteristics of PD make it difficult to interpret studies that do not control for the natural history of symptoms or for placebo effects (e.g., observational studies). In addition, because patients may have highly variable courses with or without treatment, findings from studies that have small sample sizes – even well-designed studies – potentially lack generalizability because of the inherent instability of findings derived from small numbers of patients. Further, the quality of any empirical literature depends on its capacity for accurate measurement. An additional complexity of the PD literature is that many studies rely on patient perceptions of changes in deformity and penile dimensions as primary outcomes. This approach is problematic because studies that have compared objective and subjective measures of deformity and penile dimensions report limited or no correspondence between these two methods (e.g., Bacal 2009; Hudak 2013; Matsushita 2014; Taylor & Levine 2008). Additional limitations include highly variable inclusion criteria across studies in terms of symptom severity and symptom duration.

Methods Used to Formulate the Recommendations

Expert Consensus

Expert Consensus (Delphi)

Description of Methods Used to Formulate the Recommendations

This document was written by the Peyronie's Disease Guidelines Panel of the American Urological Association Education and Research, Inc. (AUA), which was created in 2013. The Practice Guidelines Committee (PGC) of the AUA selected the committee chair. Panel members were selected by the chair. Membership of the committee included representatives of urology, family medicine, clinical psychology, patient advocacy, and other clinicians with specific expertise on this disorder. The mission of the committee was to develop recommendations that are analysis-based or consensus-based, depending on Panel processes and available data, for optimal clinical practices in the diagnosis and treatment of Peyronie's disease (PD).

AUA Nomenclature: Linking Statement Type to Evidence Strength

The AUA nomenclature system explicitly links statement type to body of evidence strength, level of certainty, magnitude of benefit or risk/burdens, and the Panel's judgment regarding the balance between benefits and risks/burdens (see the "Rating Scheme for the Strength of the Recommendations" field).

For some clinical issues, particularly diagnosis, there was little or no evidence from which to construct evidence-based statements. Where gaps in the evidence existed, the Panel provides guidance in the form of *Clinical Principles or Expert Opinion* with consensus achieved using a modified Delphi technique if differences of opinion emerged.

Rating Scheme for the Strength of the Recommendations

American Urological Association (AUA) Nomenclature Linking Statement Type to Level of Certainty, Magnitude of Benefit or Risk/Burden, and Body of Evidence Strength

	Evidence Strength A (High Certainty)	**Evidence Strength B (Moderate Certainty)**	**Evidence Strength C (Low Certainty)**
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Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Peer Review

Description of Method of Guideline Validation

The American Urological Association Education and Research, Inc. (AUA) conducted a thorough peer review process. The draft guidelines document was distributed to 78 peer reviewers. The panel reviewed and discussed all submitted comments and revised the draft as needed. Once finalized, the guideline was submitted for approval to the Practice Guidelines Committee (PGC). Then it was submitted to the AUA Board of Directors for final approval. It was approved by the AUA Board of Directors in April 2015.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

For some clinical issues, there was little or no evidence from which to construct evidence-based statements. Where gaps in the evidence existed, the Panel provides guidance in the form of *Clinical Principles* or *Expert Opinions* with consensus.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate diagnosis and treatment of Peyronie's disease (PD)

Potential Harms

- Extracorporeal shock wave therapy (ESWT) is associated with frequent adverse events (AEs). These include localized petechial bleeding or bruising in from 5% to 90% of patients with most studies reporting rates of 50% or greater, urethral bleeding or transient hematuria in from 1.9% to 100% of patients with most studies reporting rates <10%, and minor ecchymosis in from 3.6% to 16% of patients. Importantly, although severe AEs are infrequent, the most common severe AE is pain – reported in 1.9% to 4.0% of patients.
- Potential AEs of intralesional collagenase include penile ecchymosis, swelling, pain, and corporal rupture.
- Potential AEs of intralesional interferon α-2b include sinusitis, flu-like symptoms, and minor penile swelling.
- Potential AEs of verapamil include penile bruising, dizziness, nausea, and pain at the injection site.
- AEs of procarbazine include gastric disturbances, nausea, anxiety, and headache.
- Forty-three study arms reported at least one category of AEs with tunical plication surgery. The number of studies that reported particular AEs and the ranges for those AEs are listed in Table 2 in the original guideline document. The incidence of serious AEs, such as hematoma requiring reoperation or major skin necrosis, was low. The most frequently-reported AE was the presence of palpable or painful sutures; of the eleven studies that reported this AE, eight of them reported rates >10%.
- The only AEs reported with plaque incision or excision and/or grafting by more than a few studies were hematoma rates reported by 12 studies (range 0 to 26%), with ten studies reporting rates <10%, and wound infection rates reported in 11 studies (range 0 to 9%), with eight studies reporting rates of 0%.
- Only half of the studies of penile prosthesis surgery reported data on post-operative infection rates. Five studies reported rates of 0%, seven studies reported rates of <3% and eleven studies reported rates ranging from 3.5 to 12.0%. One study (Rigaud & Berger 1995) reported a rate of 60%. Twenty-seven studies reported rates of infection that required surgical revision or prosthesis explant. Fifteen studies reported rates of 0 to 3%. Eleven studies reported rates between 3.4% and 16.7%. Rigaud & Berger (1995) reported a rate of 40%. Revision rates for mechanical failure were reported by nineteen studies. Other AEs associated with surgery, such as urethral laceration, urethral erosion, or hematoma, were addressed by five or fewer of the prosthetic surgery studies.

Qualifying Statements

Qualifying Statements

- This guideline's purpose is to provide direction to clinicians and patients regarding how to recognize Peyronie's disease (PD), conduct a valid diagnostic process, and approach treatment with the goals of maximizing symptom control, sexual function, and patient and partner quality of life (QoL) while minimizing adverse events (AEs) and patient and partner burden. The strategies and approaches recommended in this guideline were derived from evidence-based and consensus-based processes. There is a continually expanding literature on PD; the Panel notes that this document constitutes a clinical strategy and is not intended to be interpreted rigidly. The most effective approach for a particular patient is best determined by the individual clinician and patient in the context of that patient's history, values, and goals for treatment. As the science relevant to PD evolves and improves, the strategies presented here will be amended to remain consistent with the highest standards of clinical care.
- While these guidelines do not necessarily establish the standard of care, the American Urological Association Education and Research, Inc. (AUA) seeks to recommend and to encourage compliance by practitioners with current best practices related to the condition being treated. As medical knowledge expands and technology advances, the guidelines will change. Today these evidence-based guidelines statements represent not absolute mandates but provisional proposals for treatment under the specific conditions described in each document. For all these reasons, the guidelines do not preempt physician judgment in individual cases.
- Treating physicians must take into account variations in resources, and patient tolerances, needs, and preferences. Conformance with any clinical guideline does not guarantee a successful outcome. The guideline text may include information or recommendations about certain drug uses ("off label") that are not approved by the U.S. Food and Drug Administration (FDA), or about medications or substances not subject to the FDA approval process. AUA urges strict compliance with all government regulations and protocols for prescription and use of these substances. The physician is encouraged to carefully follow all available prescribing information about indications, contraindications, precautions and warnings. These guidelines and best practice statements are not intended to provide legal advice about use and misuse of these substances.
- Although guidelines are intended to encourage best practices and potentially encompass available technologies with sufficient data as of close of the literature review, they are necessarily time-limited. Guidelines cannot include evaluation of all data on emerging technologies or management, including those that are FDA-approved, which may immediately come to represent accepted clinical practices. For this reason, the AUA does not regard technologies or management which are too new to be addressed by this guideline as necessarily experimental or investigational.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Clinical Algorithm

Mobile Device Resources

Patient Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2015 Apr

Guideline Developer(s)

American Urological Association Education and Research, Inc. - Medical Specialty Society

Source(s) of Funding

Funding of the committee was provided by the American Urological Association Education and Research, Inc. (AUA). Committee members received no remuneration for their work.

Guideline Committee

Peyronie's Disease Guidelines Panel

Composition of Group That Authored the Guideline

Panel Members: Ajay Nehra, MD (*Co-Chair*), Rush University Medical Center, Chicago, IL; Arthur Louis Burnett, II, MD (*Co-Chair*), Johns Hopkins University School of Medicine, Baltimore, MD; Ralph Alterowitz, MEA, Center for Intimacy after Cancer Therapy, Potomac, MD; Daniel J. Culkin, MD, The University of Oklahoma, Oklahoma City, OK; Lawrence Scott Hakim, MD, Cleveland Clinic Florida, Weston, FL; Joel J. Heidelbaugh, MD, FAAFP, FACG, University of Michigan Medical School, Ypsilanti, MI; Mohit Khera, MD, Baylor College of Medicine, Houston, TX; Kevin T. McVary, MD, Northwestern Medicine, Chicago, IL; Martin M. Miner, MD, The Mariam Hospital, Providence, RI; Christian J. Nelson, PhD, Memorial Sloan Kettering Cancer Center, New York, New York; Hossein Sadeghi-Nejad, MD, UMDNJ New Jersey Medical School, Hackensack, NJ; Allen D. Seftel, MD, Cooper University Hospital, Camden, NJ; Alan W. Shindel, MD, UC Davis School of Medicine, Sacramento, CA

Financial Disclosures/Conflicts of Interest

Conflict of Interest (COI) Disclosures

All panel members completed COI disclosures. Relationships that have expired (more than one year old) since the panel's initial meeting are listed. Those marked with (C) indicate that compensation was received; relationships designated by (U) indicate no compensation was received.

Consultant/Advisor: Ralph Alterowitz, MEA, The Center for Intimacy After Cancer Therapy Inc. (U); Mohit Khera, MD, Coloplast (C); American Medical Systems (C); Endo Pharmaceuticals (C); Kevin T. McVary, MD, Watson Pharmaceuticals (C), Lilly/ICOS (C)

Health Publishing: Arthur L. Burnett II, MD, Urology Times Editorial Council (C); VIVUS (C); Alan W. Shindel, M.D., Endotext.com (C), International Society for Sexual Medicine (C)

Leadership Position: Ralph Alterowitz, MEA, The Center for Intimacy After Cancer Therapy Inc. (U); Alan W. Shindel, M.D., Sexual Medicine Society of North America (C)

Meeting Participant or Lecturer: Ralph Alterowitz, MEA, The Center for Intimacy After Cancer Therapy Inc. (U); Kevin T. McVary, MD, Watson Pharmaceuticals (C), Lilly/ICOS (C), Lawrence S. Hakim, MD, ENDO Urology (C), Slate/Auxilium (C)

Scientific Study or Trial: Arthur L. Burnett II, MD, Acorda Therapeutics (C); Endo Pharmaceuticals (C); Pfizer (C); Auxilium Inc. (C); American Medical Systems (C); Coloplast (C); Astellas (C); Reflexonic LLC (C); VIVUS (C); Kevin T. McVary, MD, Astellas (C), Lilly/ICOS (C), NxThera (U), American Medical Systems (C), Sophris (C); Hossein Sadeghi-Nejad, MD, Endo Pharmaceuticals /Auxilium (C)

Other: Kevin T. McVary, MD, Lilly/ICOS, Principal Investigator (C), NIDDK, Principal Investigator (C), Christian J. Nelson, PhD, American Medical Systems (U)

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Electronic copies: Available from the American Urological Association Education and Research, Inc. (AUA) Web site.

Availability of Companion Documents

The AUA Guidelines-At-A-Glance mobile app is available for download from the American Urological Association Education and Research, Inc. (AUA) Web site.

Patient Resources

The following is available:

- What is Peyronie's disease? 2015. Electronic copies: Available from the Urology Care Foundation Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI Institute on July 31, 2015. The information was verified by the guideline developer on September 30, 2015.

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