MOSES Technology Improves Efficacy and Time Efficiency

1. Double-Blinded Prospective Randomized Clinical Trial Comparing Regular and Moses Modes of Holmium Laser Lithotripsy (Ibrahim, Andonian @ J Endourol; May 2020) MOSES demonstrates less retropulsion, which likely explains the significantly lower procedural and fragmentation times (i.e. efficiency)

2. Initial experience in combined ultra-mini percutaneous nephrolithotomy with the use of 120-W laser and the anti-retropulsion “Moses effect”: the future of percutaneous nephrolithotomy? (Leotsakos, Duvdevani @ Lasers Med Sci; February 2020) Moses technology with its unique anti-retropulsion and hemostatic properties could be the future of ultra-mini PCNL making it a fit for all stones operation

3. Mechanism of pulse modulated Holmium:YAG lithotripsy (King, Milner, Teichman @ AUA 2020) Moses distance mode achieves greatest ablation independent of water or air environment

4. Pulse Modulation with Moses Technology Improves Popcorn Laser Lithotripsy (Black, Ghani @ EAU 2020 & AUA 2020) MOSES technology improves visualization and reduces heat generation by achieving effective popcorn lithotripsy at lower power

5. Mini-percutaneous nephrolithotomy using ClearPetra® system and MOSES® laser lithotripsy (Popiolek, Jarl @ EAU 2020) MOSES technology minimizes scattering of stone fragments and improves the efficacy of laser lithotripsy due to optimized energy transmission

6. The impact of laser pulse type on temperature changes during ureteroscopic laser lithotripsy (Winship, Lipkin @ AUA 2019) MOSES technology reduces stone retropulsion without increasing heat generation compared to long-pulse

7. Semi closed-circuit vacuum-assisted mini percutaneous nephrolithotomy with holmium laser lithotripsy (Zanetti, Montanari @ EAU 2019) Low intra-renal pressure during mini-PCNL may be associated with lower infections. MOSES may reduce operative time due to less retropulsion

8. The management of urinary stones in pediatrics: Overcoming traditional challenges with Moses technology (Tasian @ EAU 2019) All stones were successfully removed using MOSES. Stone retropulsion was absent to minimal in 88% of patients and no patients required pre-stenting or staged ureteroscopy.

9. Initial Experience with Moses Laser Lithotripsy Using Lumenis Technology (Large, Krambeck @ WCE 2018) MOSES reduces stone retropulsion and migration, which leads to greater overall ureteral laser lithotripsy efficiency
1. **Comparison of a 120w Moses with conventional 120, 100 and 30w Holmium laser for cystolithopaxy** (Hajiha, Baldwin @ AUA 2020)
   Moses Technology saves 522$ and 820$ per case compared to non-Moses, and 100w laser respectively

2. **Will Stone Density Stop Being a Key Factor in Endourology? The Impact of Stone Density on Laser Time Using Lumenis Laser p120w and Standard 20 W Laser: A Comparative Study** (Mekayten, Duvdevani @ J Endourol; July 2019)
   Lumenis P120H with MOSES is nearly twice as fast as the 20 W laser for dusting, even in hard stones

3. **Cost-effectiveness of dusting vs. basketing intra-renal stones: a study from the edge consortium** (EDGE group @ AUA 2018)
   Estimated savings of $1343 per procedure using dusting technique for intra-renal stones, primarily due to a significantly shorter operative time

---

**Outpatient Procedures**

1. **Ambulatory Tubeless Mini-PCNL using Moses technology and Dusting Technique** (Ghani, Aldoukhi, Shields @ WCE 2018)
   MOSES during mini-PCNL allows for better dusting and stone extraction. Lower pole stones can be treated in an ambulatory setting (vs. URS or ESWL) with the potential for complete stone clearance
MOSES Technology Improves Efficacy and Time Efficiency

1. **Comparative Study of Holmium Laser Enucleation of the Prostate With MOSES Enabled Pulsed Laser Modulation** (Large, Krambeck @ Urology 2020) MOSES technology significantly reduces hemostasis time compared to standard HoLEP

2. **HoLEP vs MoLEP, first prospective randomized trial on 140 patients** (Hussein, Vavassori @ AUA 2020) MOSES for HoLEP reduces operative time and is the most effective treatment for BPH, therefore MOSES - HoLEP should be the standard for HoLEP

3. **Outcomes for patients undergoing holmium laser enucleation of the prostate with newly-optimized MOSES technology** (Nottingham, Krambeck @ AUA 2020) Performing HoLEP with MOSES technology requires less intraoperative hemostasis with excellent outcomes for both overnight and same-day discharge patients

4. **HoLEP with MOSES technology, evaluation of safety and effectiveness in a prospective randomized study on a cohort of 140 patient** (Hussein Muhamed Ismail, Vavassori @ EAU 2020) MOSES for HoLEP reduces lasing time by 5 minutes without compromising excellent outcomes and safety

Economical Value

1. **Feasibility of Holmium Laser Enucleation of the Prostate as a 1-day Surgery** (Abdul-Muhsin, Humphreys @ World J Urol; April 2020) Same-day HOLEP is safe and feasible offering health- and cost-related benefits
Outpatient Procedures

1. **Feasibility of Holmium Laser Enucleation of the Prostate as a 1-day Surgery** (Abdul-Muhsin, Humphreys @ World J Urol; April 2020) HoLEP as a same-day surgery is safe and feasible in well-selected patients.

2. **Holmium Laser Enucleation of the Prostate Is Safe and Feasible as a Same Day Surgery** (Lwin, Funk @ Urology; April 2020) Outpatient HoLEP should be considered regardless of prostate size, comorbidities, age, or anticoagulation status with no need for strict inclusion or discharge criteria.

3. **Current era Holmium laser enucleation of the prostate is a safe, reliable day surgery** (Agarwal, Krambeck @ AUA 2020) MOSES technology during HoLEP is safe and efficient for outpatient HoLEP regardless of prostate size or anticoagulation status.

4. **Holmium laser enucleation of the prostate using Moses technology in treating benign prostate hyperplasia** (Rivera @ AUA 2019) MOSES during HoLEP is safe, efficient and durable when performed as an outpatient procedure with excellent hemostasis, regardless of prostate size.

Patient Satisfaction

1. **Self-assessed Goal Achievement (SAGA) After Holmium Laser Enucleation of the Prostate (HoLEP): Association With Patients’ Postoperative Satisfaction** (Cho, Paick @ PLoS One; September 2018) Patients’ satisfaction from HoLEP is high (84.7%) and continually increases over time following surgery.

2. **Patient Satisfaction After Holmium Laser Enucleation of the Prostate (HoLEP): A Prospective Cohort Study** (Lee, Oh @ PLoS One; August 2017) Over 90% of patients undergoing HoLEP reports very high satisfaction and willingness to undergo the surgery again.

3. **Holmium Laser Enucleation of the Prostate: Results at 6 Years** (Gilling, Fraundorfer @ Eur Urol; April 2008) HoLEP is durable with 92% of patients remaining satisfied or extremely satisfied with the long-term outcome.

Risk Information: The use of the MOSES Pulse 120H laser system and fibers and in urology is contraindicated for patients who are unable to receive endoscopic treatments or are intolerant to prolonged anesthesia, as well as for resection or excision of large vascularized organs. Holmium lasers are intended solely for use by physicians trained in the use of the Ho:YAG (2.1 μm) wavelength. Incorrect treatment settings can cause serious tissue damage. The laser should be used only on tissues that are fully observable. See the system user manual for a complete list of contraindications and risks.