Cervical cancer is the leading gynecologic malignancy worldwide. After its introduction in the early 20th century by Ernst Wertheim, radical hysterectomy (RH) has played a major role in the treatment of early disease [1]. It is generally accepted that RH increases surgical morbidity by increasing surgical time, blood loss, and the rate of post-operative complications, in addition to prolonging recovery time, as compared to simple hysterectomy [2]. Furthermore, RH requires greater surgical skill, a more detailed understanding of pelvic anatomy, and if performed laparoscopically, advanced laparoscopic techniques. Additionally, there is a slower learning curve associated with developing expertise in the procedure [3].

**International symposium of RH 2013 (ISRH 2013)**

The International Symposium of RH 2013 (ISRH 2013), which was hosted by Korean Gynecologic Oncology Group (KGOG) and the department of OB/GYN of Asan Medical Center, Seoul, Korea, convened August 2nd to 4th in Seoul, South Korea. Several renowned gynecologic oncologists, including Dr. Shingo Fujii (ex-president of international gynecologic cancer society, IGCS), Dr. Farr R Nezhat (director of minimally invasive gynecologic and robotic surgery and fellowship program in United States), Dr. Bradley J Monk (chair of cervix/vulva committee of GOG in United States), Dr. Laszlo Ungar (ex-president of Hungarian society of gynecologic oncology), and Dr. Joo-Hyun Nam (president of KGOG) amongst others were invited to discuss RH current trends in treating cervical cancer. Interestingly, opinions regarding the management of stage IA2-IB cervical cancer varied between experts and by geographic location. Speakers from the United States (Dr. Farr R Nezhat and Dr. Bradley J Monk) shared their experience as well as emerging research in ultra-conservative surgery for the management of appropriately selected early stage cervical cancer, as an alternative to traditional RH procedure. In contrast Dr. Shingo Fujii and Dr. Laszlo Ungar discussed the role of more extensive surgeries such as laterally extended parametrectomy (LEP, or Mibayashi’s ultra-radical procedure of parametrectomy in Japan) for the management bulky or parametrial invasive early stage cases, to improve local control without adjuvant radiation therapy/concurrent chemo-radiation therapy (RT/CCRT).

**Ultra-conservative surgery for FIGO IA2-IB1 in United States**

In the United States, cervical cancer is the third most common gynecologic malignancy. The number of new cases and deaths from cervical cancer has decreased significantly in past 40 years [4]. Currently the prevalence of cervical cancer is estimated to be less than 10.0 per 100,000 women. This is largely attributed to widespread access to regular Papanicolaou test (PAP smear) and Human Papillomatous Virus (HPV) testing. With the recent introduction of the HPV vaccination, the rate of cervical cancer is anticipated to decrease further [5]. In contrast to other parts of the world, in the United States, most cases are diagnosed as early stage disease with small tumors [4]. As a result, research efforts are focusing on evaluating the safety and efficacy of more conservative surgical treatments. Currently, MD Anderson Cancer Center (Huston, TX, USA) is recruiting patients for a prospective study [6] to evaluate the role of more conservative surgeries, including large cervical conization, simple trachelectomy, and simple hysterectomy for the treatment of early stage (FIGO IA2-IB1), low-risk histology (any grade of squamous cell carcinoma, grade I or II of adenocarcinoma) and small tumor volume cervical cancer (tumor size ≤ 2cm, cervical stromal invasion ≤ 10mm) when pelvic lymph nodes (LN) are negative for metastases. Prior retrospective studies performed in Italy [7] and the United Kingdom [8] have supported the safety and efficacy of ultra-conservative surgery for cervical cancer.

**Current consensus for treatment of stage IB2-IIIB in the United States**

Based on the current consensus guideline for treating cervical cancer...
.. in the United States (National Comprehensive Cancer Network, NCCN) [9]. RT/CCRT is an alternate option to RH plus pelvic and para-aortic lymph node dissection for the treatment of stage IB2-IIA2 tumors. RT/CCRT is the only recommended treatment for stage IIB tumors with parametrial involvement given that these tumors have a 50% risk of lymph node metastases at the time of diagnosis [10]. The recommendation for RT/CCRT over surgery is based on the feasibility of radiation therapy in the United States, and the high treatment related morbidity associated with RH followed by RT/CCRT [11]. However, primary RT/CCRT is not without risk. Theoretically, the poor oxygen supply to areas inside a bulky tumor can lead to treatment resistance or failure. In these cases if patients require future surgical treatment, including pelvic exenteration, surgery tends to be more challenging with a higher rate of surgical complications and poor post operative quality of life [12]. Finally, the incidence of secondary malignancy (including uterine sarcoma and osteosarcoma) is being elucidated [13].

**Different surgical thinking for stage IB1-IIB outside United States**

In contrast to the United States, cervical cancer is still the leading gynecologic malignancy in Asian countries [14]. In East Asian countries, such as Japan and Korea, RH and complete lymphadenectomy is the preferred treatment for IB2-IIA2 as well as IIB cervical cancer, which is supported by complete lymphadenectomy is the preferred treatment for stage IIB tumors with parametrial involvement given that these tumors have a 50% risk of lymph node metastases at the time of diagnosis [10]. The recommendation for RT/CCRT over surgery is based on the feasibility of radiation therapy in the United States, and the high treatment related morbidity associated with RH followed by RT/CCRT [11]. However, primary RT/CCRT is not without risk. Theoretically, the poor oxygen supply to areas inside a bulky tumor can lead to treatment resistance or failure. In these cases if patients require future surgical treatment, including pelvic exenteration, surgery tends to be more challenging with a higher rate of surgical complications and poor post operative quality of life [12]. Finally, the incidence of secondary malignancy (including uterine sarcoma and osteosarcoma) is being elucidated [13].

In conclusion, current research reflects the global differences in surgical trends and management for early stage cervical cancer. Tailored surgeries, both more conservative and more aggressive approaches, are becoming accepted treatment modalities to decrease the morbidity associated with the treatment of cervical cancer, without compromising survivorship, as compared to traditional therapeutic modalities. Additionally, the role of systemic chemotherapy in early stage cervical cancer is also changing, based on several trials and the development of new chemotherapeutic and molecular agents. Continued research is needed for the treatment of early stage cervical cancer, to further understand how to optimize survivorship, while decreasing morbidity and improving quality of life.

**REFERENCES**


