SPECIAL ARTICLE

Advances in uro-oncology «Oncoforum»: The best of 2011

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KEYWORDS
Prostate cancer; Urinary bladder cancer; Kidney cancer; Kidney cancer; Testicular cancer; Penile cancer; Urology

Abstract
Objective: To put forth new findings in urologic oncology with impact in the clinical practice, presented in the principal annual meetings (EAU, ESTRO, AUA, ASCO and ASTRO).
Methods: The reporters of the OncoUrology Forum select and classify the summaries on genitourinary cancer based on the impact on present or future practice. This document includes the summaries having the highest scores.
Results: The OncoUrology Forum committee considered the following messages important. The PIVOT study shows that radical prostatectomy reduces the specific mortality of prostate cancer (PCa) compared to follow-up in observation, in localized high risk PCa or PSA > 10 ng/mL. Dissection of the pelvic lymph nodes should be done in all the patients with bladder cancer treated by radical cystectomy, regardless of the tumor stage, in accordance with baseline analysis of the Surveillance, Epidemiology and End Results (SEER) data. An analysis of the SEER of patients with renal cancer concluded that the radical nephrectomy is associated to worse cardiovascular and overall survival compared to those treated with partial nephrectomy in localized renal cell carcinoma of ≤ 2 cm. In patients with nonseminomatous germ cells cancer, retroperitoneal lymph node dissection should not be omitted when the residual tumor size is ≤1 cm because of the considerably high risk of teratoma and viable cancer.
Conclusions: Although these studies do not offer a final response for all the oncourological subjects, these results will have an impact on the daily clinical practice.

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PALABRAS CLAVE
Neoplasia prostática; Neoplasia de la vejiga urinaria;

Avances en uro-oncologia «Oncoforum»: lo mejor de 2011

Resumen
Objetivo: Exponer los nuevos hallazgos en urología oncológica con impacto en la práctica clínica presentados en las principales reuniones anuales (EAU, ESTRO, AUA, ASCO y ASTRO).

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Neoplasia renal; Neoplasia testicular; Neoplasia del pene; Urología

**Métodos:** Los informadores del OncoUrology Forum seleccionan y clasifican los resúmenes sobre cáncer genitourinario en función del impacto sobre la práctica clínica presente o futura. Este documento incluye los resúmenes con mayor puntuación.

**Resultados:** La comisión del OncoUrology Forum consideró importantes los siguientes mensajes. El estudio PIVOT demuestra que la prostatectomía radical reduce la mortalidad específica del cáncer de próstata (CaP), en comparación con seguimiento en observación, en CaP localizado de alto riesgo o PSA >10 ng/ml. La disección de los ganglios linfáticos pélvicos debería hacerse en todos los pacientes con cáncer vesical tratados mediante cistectomía radical, independientemente del estadio tumoral, de acuerdo con un análisis de la base de datos Surveillance, Epidemiology and End Results (SEER). Un análisis de la SEER de pacientes con cáncer renal concluyó que la nefrectomía radical se asocia al peor supervivencia global y cardiovascular, en comparación con la nefrectomía parcial, en carcinoma de células renales localizado y < 2 cm. En pacientes con tumor de células germinales no seminomatoso, no se debe omitir la disección de los ganglios linfáticos retroperitoneales tras quimioterapia cuando el tamaño tumoral residual es ≤ 1 cm, debido al riesgo considerablemente alto de teratoma y cáncer viable.

**Conclusiones:** Aunque estos estudios no ofrecen una respuesta final para todos los temas oncourológicos, sus resultados tendrán impacto en la práctica clínica diaria.

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**Context**

The OncoForum is an interactive platform that comprises the main urology and oncology congresses, coordinated by urologists, radiotherapy oncologists, and clinical oncologists who attend sessions on genitourinary cancer and select the papers of greatest impact. An independent review committee reviews the papers and values their impact on present and future clinical practice. In addition, information is provided to put the data in the context of current clinical evidence. The presentations of these abstracts are available at: [www.oncoforum.org](http://www.oncoforum.org).

**Objective**

To expose the most relevant advances on genitourinary cancer presented at the major urology and oncology congresses on an annual basis,¹ this review being that referred to 2011.

**Evidence acquisition**

This document brings together the summaries of impact on prostate (PCa), renal, urothelial, and penis and testicle cancer presented at the 2011 EAU, ESTRO, AUA, ASCO, and ASTRO annual meetings that received the highest scores.

**Evidence synthesis**

**Prostate cancer**

**Screening**

The analyses of PSA screening with an interval of 4 years resulted in a relative reduction in PCa metastases (30%), according to the Rotterdam section of the European Randomized Study of Screening for PCa (ERSPC).² This results in a number of 357 which is needed to screen in order to prevent a case of metastasis and a number of 23 which is necessary to diagnose to prevent a metastasis.

**Results after radical prostatectomy**

In the PIVOT¹ U.S. study, of 5023 fit men ≤ 75 years, with T1-2NxM0 PCa diagnosed 12 months earlier, a PSA < 50 ng/ml and a life expectancy > 10 years, 731 were randomized between 1994 and 2002 for radical prostatectomy (RP). After a median follow-up of 10 years, all-cause mortality (primary endpoint) was not significantly different between both groups (49.9% in the observation group versus 47.0% in the RP group). PCa-specific mortality in the general population showed no statistically significant difference either (Table 1). However, potentially significant reductions in mortality were observed in men with PSA levels > 10.0 ng/ml and those with high-risk tumors according to D’Amico. This indicates that the RP works, at least in patients with high-risk PCa or PSA > 10 ng/ml; however, the data also support the active follow-up in low-risk tumors.

**Robot-assisted laparoscopic radical prostatectomy**

The learning curve of the robot-assisted laparoscopic RP (RALRP) is longer than initially thought. Therefore, the RAL-RPs should be performed by surgeons with a high volume of interventions, in accordance with the multicenter retrospective study in which 3 surgeons operated on 3794 men between 2003 and 2009.¹³ 1600 cases were required to achieve a positive surgical margin rate below 10%, and after 750, the operation time stabilized in less than 150 min.

**Results after radical prostatectomy for high-risk localized or locally advanced prostate cancer**

A retrospective study of patients with high-risk localized PCa, treated with RP and lymphadenectomy between 1987 and 2009 in 8 European centers with high volume of care, included 1257 patients and evaluated the impact of positive surgical margins on survival.⁶ 57.3% of the patients had negative margins, 23.5% a positive margin, 7.6% 2 positive margins, and 11.6% had 3 positive margins. The multivariate analysis showed that each positive margin increased by 34% the risk of PCa-specific death and by 32% overall mortality. Thus, the number of positive surgical margins after RP was found to be an independent predictor of overall and
Table 1  PCa-specific survival (secondary variable) in the PIVOT clinical trial.

<table>
<thead>
<tr>
<th>Group of patients</th>
<th>Observation</th>
<th>Radical prostatectomy</th>
<th>RC</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>8.4%</td>
<td>5.8%</td>
<td>0.63</td>
<td>0.36–1.09</td>
<td>0.09</td>
</tr>
<tr>
<td>High risk</td>
<td>17.5%</td>
<td>9.1%</td>
<td>0.40</td>
<td>1.16–1.00</td>
<td>0.04</td>
</tr>
<tr>
<td>PSA &gt; 10 ng/ml</td>
<td>12.8%</td>
<td>5.6%</td>
<td>0.36</td>
<td>0.15–0.89</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Table 2  Results in patients with positive lymph nodes after only RP in a U.S.A. experienced center.

<table>
<thead>
<tr>
<th></th>
<th>Survival at 5 years</th>
<th>95% CI</th>
<th>Survival at 10 years</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall survival</td>
<td>88%</td>
<td>82–92%</td>
<td>64%</td>
<td>53–73%</td>
</tr>
<tr>
<td>PCa-specific survival</td>
<td>92%</td>
<td>86–95%</td>
<td>71%</td>
<td>60–79%</td>
</tr>
<tr>
<td>Supervival without metastasis</td>
<td>73%</td>
<td>66–78%</td>
<td>69%</td>
<td>60–76%</td>
</tr>
<tr>
<td>bDFS</td>
<td>35%</td>
<td>28–42%</td>
<td>30%</td>
<td>21–37%</td>
</tr>
</tbody>
</table>

bDFS: biochemical disease-free survival.

Specific PCa survival in patients with PSA > 20 ng/ml, or cT3a, or Gleason > 8.

A retrospective study of the Memorial Sloan-Kettering Cancer Center evaluated the evolution of 377 patients with PCa with positive nodes, treated with RP as monotherapy between 1987 and 2009. 30% remained without biochemical recurrence 10 years after the RP, especially in the cases of Gleason > 8 or less than 2 positive lymph nodes (Table 2).

Adjuvant radiotherapy to radical prostatectomy

The two major controlled clinical trials (CT) evaluating adjuvant radiotherapy (RT) after RP in high-risk tumors show contradictory survival results. At the EAU meeting, a direct comparison was presented. 8 The 10-year results of the EORTC 22911 study showed no differences in overall survival between the adjuvant RT group and the follow-up group (77% vs. 81%; p > 0.1), while the estimated overall survival at 10 years in the SWOG 8794 study improved significantly with adjuvant RT (74% vs. 66%; RR: 0.72; p = 0.023). The immediate RT group of the EORTC and SWOG studies obtained similar overall rates, but the EORTC observation group showed better results than the SWOG. The fact that the selected patients in the SWOG study had a worse overall prognosis (Table 3) could explain the discordant results between the two studies.

Moment of administration of salvage radiotherapy after radical prostatectomy

In the ASTRO meeting, a meta-analysis of the studies on salvage RT was presented, to identify the pathological, clinical, and therapeutic factors associated with recurrence-free survival (RFS) for at least 3 years after salvage therapy. 9 This analysis included 42 clinical trials and 6098 patients. Only the PSA prior to the salvage therapy and the RT dose were independently associated with the RFS. Each increase of 0.1 ng/ml of the PSA at the time of salvage RT was associated with a 2.5% loss of the RFS. In addition, there was a 2.2% improvement in the RFS for each additional Gy. Thus, these data support the initiation of salvage RT with the lowest possible PSA level and with an escalating dose of RT > 70 Gy.

Hormone treatment

A meta-analysis presented at the ASTRO congress concluded that androgen deprivation (AD) is an effective treatment for unfavorable risk PCa ([RR: 0.69; p < 0.001 for PCa-specific mortality], [RR: 0.86; p < 0.001 for overall mortality]) and which does not increase the risk of CV death (11.0% with AD versus 11.2% with control; RR: 0.93, 95% CI: 0.79–1.10; p = 0.41). 10,11 This analysis included eight clinical trials and 4141 patients with non-metastatic unfavorable risk PCa. It is unknown whether these results would be different for the subgroup of men with preexisting cardiac comorbidity.

In the phase III PR7 trial, with median follow-up of 6.9 years, 1386 patients with PSA progression after RT were randomized to receive intermittent AD (IAD) or continuous AD (CAD). 12 The IAD group started with a treatment period of 8 months, and a new cycle was started if the PSA was >10 ng/ml or in the case of clinical evidence of progression (Fig. 1). The IAD was not lower than the CAD in relation to overall survival, with a median overall survival of 8.8 years in the IAD group and 9.1 years in the CAD group (RR: 1.02; 95% CI: 0.86–1.21; p = 0.009 for non-inferiority). The IAD group

Table 3  Population of patients included in the SWOG 8794 and EORTC 22911 studies.

<table>
<thead>
<tr>
<th></th>
<th>SWOG 8794 (n=425)</th>
<th>EORTC 22911 (n=1005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median follow-up (years)</td>
<td>12.6</td>
<td>10.6</td>
</tr>
<tr>
<td>Median age (interval, years)</td>
<td>65 (44–79)</td>
<td>65 (47–75)</td>
</tr>
<tr>
<td>Only 10 pat. &gt; 75 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional status of the WHO at the time of the inclusion</td>
<td>FS 0: 19.3%</td>
<td>FS 0: 94.0%</td>
</tr>
<tr>
<td></td>
<td>FS 1: 79.2%</td>
<td>FS 1: 5.5%</td>
</tr>
<tr>
<td></td>
<td>FS 2: 1.4%</td>
<td>FS 2: &lt;1%</td>
</tr>
<tr>
<td>pT2 with positive surgical margins (%)</td>
<td>12.9</td>
<td>16.2</td>
</tr>
<tr>
<td>Extracapsular extension (%)</td>
<td>54.3</td>
<td>57.6</td>
</tr>
<tr>
<td>Invasion of only seminal vesicles (%)</td>
<td>10.6</td>
<td>13.2</td>
</tr>
<tr>
<td>The 3 risk factors (%)</td>
<td>22.1</td>
<td>12.3</td>
</tr>
</tbody>
</table>

FS: functional status.
demonstrated increased PCa-specific mortality, but fewer deaths unrelated to PCa, compared with the CAD group.

The quality of life variables such as physical functioning, fatigue, urinary problems, hot flashes, and erectile function were all significantly in favor of the IAD.\textsuperscript{13}

In the EAU congress, the long-term outcomes were presented (median follow-up of 12.9 years) of the EORTC 30891 study, which included 985 patients with T0-4 N0-2 M0 PCa, not candidates for local therapy.\textsuperscript{14} The results confirmed the previous analysis with a median follow-up of 7.8 years; the immediate AD resulted in a small but statistically significant increase in overall survival (RR = 1.25; \textit{p} = 0.03), but there was no significant difference in cancer-specific survival compared with the deferred AD until the symptomatic progression of the disease (RR: 1.17; \textit{p} = 0.19). In the deferred treatment group, 52.8% started the treatment after 10 years, and 30.8% died without needing AD. In the group of patients who died 3–5 years after the diagnosis, PCa-specific survival was significantly in favor of the immediate AD (\textit{p} = 0.015).

**Castration-resistant prostate cancer**

At the EAU congress, the results of the COU-AA-301 study were presented, which showed that the combination of abiraterone acetate and low-dose prednisone had a favorable safety profile (55% of grade 3–4 adverse events in the abiraterone group, versus 58% in the placebo one) and improved overall survival compared to placebo in 1195 patients with castration-resistant prostate cancer (CRPC) with metastasis and progression after treatment with docetaxel (Table 4).\textsuperscript{15,16}

Phase I/II MDV3100 studies in patients with metastatic and progressive CRPC,\textsuperscript{17} presented in the EAU (Table 5) appear to show antitumor lasting activity in patients with CRPC, both chemonaïve and previously treated with chemotherapy. Currently, phase III studies in patients previously treated with docetaxel (AFFIRM) were initiated and in patients without prior chemotherapy (PREVAIL).

Another promising drug for the future treatment of metastatic CRPC was presented at the ASCO congress. In a clinical trial of treatment interruption, open and in phase II, 171 men with metastatic CRPC and measurable disease received cabozantinib during a run-in period of 12 weeks, and they continued the treatment depending on the response at 12 weeks.\textsuperscript{18} 31 patients with stable disease were randomized to receive cabozantinib or placebo after 12 weeks; the median progression-free survival was 21 weeks with cabozantinib versus 6 weeks with placebo (HR: 0.13; \textit{p} = 0.0007). The most notable aspect was the response of the bone scan. Of the 108 evaluable patients with bone metastases and a postbasal bone scan or more, 19% showed complete resolution, 56% partial resolution, 21% stable disease, and only 3% showed progressive disease.

Finally, at the breaking news session of the AUA congress, the results of the DMB 147,\textsuperscript{3} phase III, multicenter, double-blind with 1432 CRPC patients, recently published in Lancet\textsuperscript{19} were presented. Denosumab increased the bone metastasis-free survival (HR: 0.85; \textit{p} = 0.028) and the time to the first bone metastasis (HR: 0.84; \textit{p} = 0.032); however, there was no difference between groups in overall survival (HR: 1.01; \textit{p} = 0.91) and the progression-free survival (HR: 0.89; \textit{p} = 0.09). The adverse events were comparable except for mandibular osteonecrosis (5% with denosumab; 0% in the placebo group). Part of these phase III studies with positive data from their main objectives will entail changes in clinical practice, which surely will be included in reviews of the clinical guidelines of the EAU.\textsuperscript{20}

### Table 4 Results of overall survival of the COU-AA-301 clinical trial.

<table>
<thead>
<tr>
<th>Follow-up (months)</th>
<th>Median OS with AA (months)</th>
<th>Median OS with placebo (months)</th>
<th>HR</th>
<th>95% CI</th>
<th>\textit{p} value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis</td>
<td>12.8</td>
<td>14.8</td>
<td>10.9</td>
<td>0.65</td>
<td>0.54–0.77</td>
</tr>
</tbody>
</table>

AA: abiraterone acetate; HR: hazard ratio; OS: overall survival.

### Table 5 Results of the phase I/II clinical trial with MDV3100.

<table>
<thead>
<tr>
<th></th>
<th>Without previous chemotherapy</th>
<th>After chemotherapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median time with treatment</td>
<td>51 weeks</td>
<td>17 weeks</td>
</tr>
<tr>
<td>Median time to PSA progression\textsuperscript{a}</td>
<td>Not reached</td>
<td>33 weeks</td>
</tr>
<tr>
<td>Median time to PSA progression\textsuperscript{b}</td>
<td>41 weeks</td>
<td>20 weeks</td>
</tr>
<tr>
<td>Median time to radiographic progression</td>
<td>56 weeks</td>
<td>24 weeks</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Increase \( \geq 25\% \) with respect to the basal PSA.

\textsuperscript{b} Definition of the Prostate Cancer Working Group 2.
Bladder cancer

Fluorescence cystoscopy

Most studies on fluorescence cystoscopy have shown that the tumor detection rate is greater under fluorescent light, compared with white light; however, the results of the recurrence rates are conflicting. In an RCT conducted in a UK center, 249 patients with suspected non-muscle invasive bladder cancer (NMIBC) were randomized to initial treatment with transurethral bladder resection (TUR) and hexamethoniumvinate plus a single bolus of mitomycin C (MMC) or TUR plus white light with a single bolus of MMC. Although the TUR with fluorescent light improved NMIBC detection, it did not reduce the relapse rate at 12 months compared with the TUR with white light (15% vs. 20%; \( p = 0.5 \)).

Second transurethral bladder resection in high-grade T1 tumors

According to the guidelines of the EAU in the case of high-grade T1 tumors, a second TUR should be performed from 2 to 6 weeks after the initial resection. A Spanish group used this strategy of treatment in 155 patients with T1 high-grade transitional cell carcinoma (TCC) with invasion of the lamina propria. All the patients received complete initial therapy with TUR + MMC instillation + maintenance bacillus Calmette-Guérin (BCG). In the 3 months following the initial TUR, the T1a patients underwent cystoscopy + cytology, while the T1b ones were performed a new TUR. After a median follow-up of 40.6 months, the rate of progression was 4.7% for T1a patients and 25.3% in the group of patients with T1b tumors (\( p < 0.001 \)). The AUA summary of this group concluded that a second TUR can be performed safely after administering BCG, and that limiting the second TUR to T1b tumors does not significantly increase the risk of progression. However, this is not a randomized clinical trial and no patient with T1a was performed a second TUR. Moreover, discrimination between T1a and T1b is often difficult.

In a phase III, multicenter, open study, and with a single treatment group, 129 patients with carcinoma in situ and/or high-grade NMIBC resistant to BCG received treatment with intravesical instillation of MCC (a DNA complex and mycobacterial cell wall). According to the preliminary analysis, the overall disease-free survival (no recurrence) after one year was 25%, and MCC was well tolerated. If these results were confirmed, MCC could be an alternative to cystectomy for these patients.

Biomarker to decide on adjuvant treatment after radical cystectomy

A multicenter study of 290 patients treated with radical cystectomy (RC), with at least one bilateral lymph node and without neoadjuvant therapy, showed that the FGFR3 mutation was detected in 13% of the RCs and was associated with a lower stage, lower grade, no CIS, no lymphovascular invasion, and stage pN0. As the FGFR3 mutation selectively identifies the patients with favorable tumors, it might be a promising marker to avoid excessive adjuvant treatment after RC.

Impact of pelvic lymph node dissection

According to the guidelines of the EAU, the RC includes resection of the regional lymph nodes, without having sufficiently defined the anatomical extent of the resection. The SEER data demonstrate that the lymphadenectomy was omitted in 25% of the patients (based on 11,183 RCs conducted between 1988 and 2006) and more frequently in patients with organ-confined disease. However, the cancer-specific survival rates in patients with lymphadenectomy were higher (Fig. 2). A Cox regression multivariable analysis showed that the omission of the lymphadenectomy was an independent risk factor for overall mortality in all tumor stages (\( p < 0.03 \)) and cancer-specific mortality in patients with pTa/CIS, pT1, and pT2 (\( p < 0.01 \)) stages, but not in pT3 or pT4 (\( p > 0.05 \)) patients. So, until the results of the randomized studies are available, lymphadenectomy in patients undergoing RC should not be omitted, regardless of the tumor stage.

Renal cancer

Localized renal cancer

In the AUA meeting, there were three retrospective reviews of a single center, which evaluated the diagnostic value of the percutaneous needle biopsy of localized renal cancer. In the subgroup of patients with benign or non-diagnostic biopsy who underwent surgery, 59–82% of the patients had cancer, detected in the resected sample. The percutaneous needle biopsy had a high positive predictive value (94.7–100%) and a very low negative predictive value (11.7–36.4%). Because the patients with benign or non-diagnostic biopsies have a high risk of undetected tumors, they require careful follow-up (by image).

At the ASCO meeting, an analysis of the SEER American population registry (1998–2007; \( n = 4216 \) patients with

![Figure 2](image.png)

**Figure 2** Difference in cancer-specific survival at 10 years after RC, with or without pelvic lymph node dissection (PLND), in accordance with the results of the SEER database.
renal cell carcinoma ≤ 2 cm) was presented, comparing the survival outcomes after partial nephrectomy (PN) or radical nephrectomy (RN). According to the EAU guidelines, in tumors up to 7 cm, nephron sparing surgery should be attempted whenever possible. The performance of PN was rising steadily, from 27% of all the cases in 1998 to 66% in 2007. The NR is associated with a twofold increased risk of overall mortality (RC: 2.24–1.02; 95% CI: 1.75–2.84) and cancer-specific mortality (RC: 2.53; 95% CI: 1.51–4.23) compared with the PN. The association between the poor functional renal results and the cardiovascular events is important in the patients with renal cell carcinoma (RCC). The PN should be performed in centers with a high volume of patients and with proven experience.

Treatment of localized renal cancer

Another analysis of a Canadian population registry (1998–2008) evaluated the effect of age and concomitant diseases on the complication rate of the RN and PN. Data were available for 20,286 RN and 4292 PN. The complication rates were very similar (34.3% vs. 34.1%). The patients were more likely to have cardiac, respiratory, vascular, and surgical complications after the RN, while the genitourinary and specific complications of nephrectomy were more frequent in the patients with PN. The rate of complications after the PN and RN in general practice is higher than previous estimates, especially in the elderly and patients with concomitant diseases.

Treatment of advanced/metastatic renal cell cancer

A UK retrospective study analyzed a cohort of 62 patients with metastatic RCC in whom an observation period prior to the systemic treatment was scheduled due to slowly progressive or asymptomatic disease (2005–2010). The median observation time prior to the systemic treatment was 18.7 months; the median progression-free survival with the first therapy was 9.0 months and the median overall survival was 25.2 months. Thus, in the patients with metastatic RCC with favorable or intermediate prognosis, it would be possible to delay the treatment, although more studies are needed to confirm this finding.

At the ASCO meeting, the AXIS clinical trial, open and in phase III, in which 723 patients with clear cell metastatic RCC were randomized to the second-line treatment with axitinib or sorafenib, was presented. Axitinib prolonged progression-free survival compared with sorafenib (Table 6). There were withdrawals from the study due to adverse events in 3.9% of the patients treated with axitinib and 8.2% of the patients in the sorafenib group.

Testicular and penile cancer

Residual disease after chemotherapy

In a German multicenter study, the records of 261 patients with nonseminomatous germ cell tumors operated with retroperitoneal lymph node dissection after

### Table 6  Efficacy results of the AXIS study.

<table>
<thead>
<tr>
<th></th>
<th>Axitinib (n = 361)</th>
<th>Sorafenib (n = 362)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median PFS (months. All)</td>
<td>6.7</td>
<td>4.7</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Before the cytokines</td>
<td>12.1</td>
<td>6.5</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Before sunitinib</td>
<td>4.8</td>
<td>3.4</td>
<td>0.011</td>
</tr>
<tr>
<td>Objective response (%)</td>
<td>19.4</td>
<td>9.4</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

PFS: progression-free survival.

### Table 7  Histopathological findings in patients with nonseminomatous GCT who underwent retroperitoneal lymphadenectomy, stratified according to the size of the residual tumor.

<table>
<thead>
<tr>
<th>Incidence</th>
<th>Mean residual tumor (RT) diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RT ≤ 1 cm (n = 28)</td>
</tr>
<tr>
<td>Teratoma</td>
<td>21.4%</td>
</tr>
<tr>
<td>Viable cancer</td>
<td>10.7%</td>
</tr>
<tr>
<td>Fibrosis/necrosis</td>
<td>64.3%</td>
</tr>
</tbody>
</table>
chemotherapy (1989–2010) were revised. The data suggest that lymphadenectomy should not be omitted in residual tumors ≤ 1 cm, because in a considerable number of patients, teratoma and viable cancer are detected (Table 7). However, this should be confirmed prospectively.

Treatment of penile cancer
Prophylaxis by means of inguinal lymphadenectomy in penile cancer has significant morbidity. A prospective study carried out in a single center with 62 patients, without regional lymph node metastases at the time of the presentation or in the first follow-up (<3 months), using a rigorous protocol for active follow-up (Fig. 3) after the treatment of the squamous cell primary carcinoma of the penis, according to the local tumor classification, after a median follow-up of 25 months, 16.1% of the patients developed metastases in lymph nodes requiring lymphadenectomy. Therefore, the authors determine that the active monitoring of the inguinal lymph node chains is an acceptable alternative to the dynamic biopsy of the sentinel lymph node to avoid the morbidity of prophylactic lymphadenectomy. Further studies are necessary to confirm these data.

Conclusions
At the sessions on the major genitourinary oncology congresses held in 2011, there have been clinical trials with new hypotheses and confirmation of others. Some results have had an impact on clinical practice, while others will do so in the future.

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Conflict of interest
The authors declare that they have no conflict of interest.

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