Men diagnosed with localized prostate cancer know choosing the right treatment can be difficult. Consult five doctors, and you may well get five starkly different recommendations. Now an important report released this week by the Agency for Healthcare Research and Quality has identified the source of the confusion: Reliable scientific evidence on the effectiveness and harms of the differing treatment options is sorely lacking.

Below are 11 kernels of information drawn from the report that men should be aware of before choosing a prostate cancer treatment. Don’t stop with these, however. Anyone pondering any of the treatments the report covers would do well to read its findings carefully. It reviews all of the available scientific evidence—the authors considered 592 published articles—on the effectiveness and potential harms of eight widely used treatment strategies: radical prostatectomy, external beam radiotherapy (including intensity-modulated radiation therapy and proton beam therapy), brachytherapy, cryoablation, androgen deprivation therapy, watchful waiting, robotic prostatectomy, and high-intensity focused ultrasound therapy.

The hard truth, it concludes, is that reliable evidence simply doesn't exist to show that any of these treatments are more effective at curing cancer or less harmful than the others. Men with cancer already know, however, that intense marketing and promotion efforts by the organizations that make the various treatments possible—be they trade associations, individual companies, medical associations, or individual physicians—often tell a much rosier story. In this case, none of the report's authors report any potential financial conflicts of interest. A rare find, in a field notorious for them. What you need to know:

1. It isn't clear that aggressively treating prostate cancer saves lives. One study shows that men under 65 who choose surgery over watchful waiting, for example, are less likely to die or have their cancer spread. However, since PSA tests were not used to initially detect the cancer, it isn't known if this finding applies to men whose cancer are detected through PSA screening (today, the vast majority of cancers are detected this way, and it's likely that cancers found via PSA screening have different natural progressions from those detected via rectal exam). Another
smaller study showed no difference in survival between surgery and watchful waiting.

2. All treatment options can result in adverse effects (primarily urinary, bowel, and sexual), although the severity and frequency can vary between treatments. It isn’t uncommon for patients and doctors to gloss over this fact until the treatment is finished and side effects are irreversible.

3. If you do seek aggressive treatment, be aware that erectile dysfunction is a common side effect. According to one reliable study, the Prostate Cancer Outcomes Study, 58 percent of men undergoing radical prostatectomy, 43 percent undergoing radiation therapy, and 86 percent undergoing androgen deprivation therapy experienced erectile dysfunction. In comparison, 33 percent of men undergoing watchful waiting report erectile dysfunction. Some newer treatments such as cryosurgery, intensity-modulated radiation therapy, and proton beam therapy may result in fewer side effects, but strong evidence doesn’t yet prove this.

4. Urinary leakage is another common side effect of prostate cancer treatment. The Prostate Cancer Outcomes Study reports that radical prostatectomy resulted in leakage 35 percent of the time; radiation therapy, 12 percent; and androgen deprivation, 11 percent.

5. Bowel urgency is less common than other side effects. However, 3 percent of men undergoing radiation, 3 percent undergoing androgen deprivation, and 1 percent undergoing radical prostatectomy experience this problem.

6. A lack of research makes it impossible to compare several newer treatments: cryotherapy, laparoscopic (including robot-assisted) radical prostatectomy, androgen deprivation therapy, and high-intensity ultrasound or radiation therapy. There are also no data available from randomized trials comparing proton beam therapy, which uses a different type of subatomic particle to kill cancer cells from those used in other radiation therapies, with other types of external beam radiotherapy.

7. Clinicians are likelier to recommend procedures they have performed regardless of tumor grades or PSA levels. In other words, urologists are likelier to recommend surgery and radiation oncologists to recommend radiation.

8. Urinary complications and incontinence were rarer for patients whose surgeons performed more than 40 surgeries per year. The length of hospital stays was also shorter for patients operated on by surgeons who frequently performed more radical prostatectomies.

9. Teaching hospitals had a lower rate of surgery-related complications and higher scores for operative quality than did other hospitals. In general, hospital
readmission rates were lower in hospitals that frequently treated prostate cancers.

10. Adding hormone therapy prior to radical prostatectomy does not improve survival or decrease recurrence rates, but it does increase the chance of adverse events. Combining radiation with hormone therapy may decrease mortality. But compared with radiation treatment alone, the combination increases the chance of impotence and abnormal breast development.

11. More than 90 percent of men say they would make the same treatment decision again, regardless of the treatment received.