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THE EFFECT OF UNIVERSAL HEALTH INSURANCE ON MALPRACTICE CLAIMS: THE JAPANESE EXPERIENCE

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The Effect of Universal Health Insurance on Malpractice Claims: The Japanese Experience

By J. Mark Ramseyer*

Abstract: Japanese patients file relatively few medical malpractice claims. To date, scholars have tried to explain this phenomenon by identifying "faults" in the Japanese judicial system. They look in the wrong place. Largely, the faults they identify do not exist.

To explore the reasons behind Japanese malpractice claiming patterns, I instead begin by identifying all malpractice suits that generated a published district court opinion between 1995 and 2004. I then combine the resulting micro-level dataset with aggregate data published by the courts, and publicly available information on the Japanese health care industry.

I locate the explanation for the dearth in claims in the patterns of Japanese medical technology, and the reason for that technology in the national health insurance program. In order to contain the cost of its universal national health insurance plan, the Japanese government has radically suppressed the price it pays for the technologically most sophisticated procedures. Predictably as a result, Japanese doctors and hospitals have focused instead on more rudimentary -- and more generously compensated -- care. Yet, for reasons common to many societies, Japanese patients do not sue over rudimentary care. They sue the physicians who supply the most sophisticated care. Japanese patients bring relatively few malpractice suits because the government has (for reasons of cost) suppressed the volume of the services (namely, highly sophisticated services) that would otherwise generate the most malpractice claims.

JEL: I12, I18, K13, K32

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The Effect of Universal Health Insurance
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Potentially, universal health insurance programs do not just alter the distribution of medical services; potentially, they also shape claiming and litigating behavior in malpractice disputes. After all, the programs reduce the direct cost of medical services to patients. The lower costs boost demand, and -- to prevent the drain on the public fisc -- the government could (and usually does) respond by suppressing the amounts it pays suppliers.

By cutting the price it pays suppliers, a universal insurance program alters both the quality and the mix of medical services sold. Facing state-mandated prices below market-clearing levels, suppliers will cut the quality of the services they provide. But because the program also changes the relative prices of the various medical services, suppliers will shift the mix of services they sell as well. They will offer relatively more of those services commanding the higher mandated prices. They will offer less of those commanding the lower prices.

For malpractice claiming patterns, these changes create potentially cross-cutting effects. All else held equal, as the suppressed prices induce sellers to degrade quality, malpractice claims should rise. But all else will seldom stay equal. If a legislature caused sellers to depreciate quality the courts could, for example, respond by holding suppliers to lower standards of care.

Less intuitively, as sellers change the mix of services they offer in response to the new price structure, they may shift the mix away from services that generate the most malpractice claims. Consider the logic (explained in more detail below). To suppress the potentially exploding costs, a legislature might cut the relative price it pays for the more sophisticated -- and expensive -- services. Technologically intensive, physically invasive, implemented by a team of medical specialists, and targeted toward high-risk patients, these services often cause more observably adverse events than ordinary primary care. They also generate the most legally cognizable negligence claims. Necessarily, services that generate the most provable negligence and observable "bad outcomes" will generate the most malpractice claims.

In the article that follows, I explore these issues with aggregate data on Japanese malpractice suits and insurance premia, and micro-level data on all Japanese published medical malpractice opinions from 1995-2004. Since the late-1950s, the Japanese government has offered universal health insurance. The program heavily subsidizes the cost of medical services, but does so at rates that poorly compensate the most modern and sophisticated procedures. As a result, Japanese physicians offer large quantities of rudimentary medical services. They offer far less of the sophisticated procedures at the heart of modern medicine.

For malpractice disputes, the consequences have been two-fold. First, Japanese patients disproportionately sue their best doctors. The most sophisticated physicians see the highest-risk patients; they offer the most complex procedures; they work in large hospitals where teams of co-workers witness any mistakes they make; and the courts hold them to the highest standards. The low quality doctors (one-third of all Japanese

physicians) run small clinics -- sometimes little more than government-insurance mills. They seldom specialize; they offer the simplest services; and they work in environments where no one except their nurse (whose job hinges on their good will) sees what they do. Japanese patients often sue the former; they seldom sue the latter.

Second, Japanese patients sue their doctors (all doctors) less often than patients sue doctors in the U.S. Patients anywhere seldom sue unless they experience an observable "bad outcome." But observably bad outcomes do not as often occur when physicians work in small settings, do relatively little, and see fundamentally healthy patients. They occur when physicians undertake complicated procedures among a team of medical specialists in large hospitals to save high-risk patients. Because of the skewed reimbursement rates, Japanese doctors perform plenty of simple procedures and prescribe large quantities of ordinary antibiotics. They offer less of the technologically intensive, complicated, invasive procedures. In part because the latter -- not the former -- generate the malpractice disputes, Japanese patients bring few malpractice claims.[1]

I begin by reviewing some basic comparative statistics on medical malpractice and the secondary literature on malpractice litigation in Japan (Section I). I offer a brief description of the Japanese health care industry (Section II). I describe my data and variables, and investigate potential biases (Section III). Using the data, I then explore the impact of the Japanese national health insurance program on malpractice claims (Sections IV, V, VI). Given the very real biases in the dataset, Section III is long. Impatient readers may wish to skim ahead to Section IV, and return to III as necessary.

I. The Literature

A. The United States -- the Short Story:

We know surprisingly little about medical malpractice disputes in Japan, but we know a good bit about them in the U.S. Given the massive amounts of wealth transferred, scholars devote considerable attention to the disputes. Although this is not a study of American malpractice, at least implicitly most readers will compare Japan to what they think they know of the U.S. Consider, then, some simple statistics.

In the U.S. (with its population of 307 million; the Japanese population is 128 million), patients or their heirs file 50,000-160,000 paid malpractice claims each year. In a careful study, Mello & Studdert (2006: 13) propose the low end of the range: 50,000 to 60,000 paid claims annually, for a total transfer of $5.8 billion. The AON insurance brokerage firm proposes the high end: 156,000 paid claims, for a total $28.7 billion (AON, 2004).[2]

Within the U.S., disputing patterns vary widely by region. From 1990 to 1997, claimants in Florida (with its 14 million population) filed about 2,600 claims (Vidmar, et

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[1] Granted, simple procedures generate medical malpractice claims too. Even a simple knee operation, after all, can generate a claim if the doctor operates on the wrong knee. And patients do sue non-specialist clinic doctors in Japan. The point here is simply that the more sophisticated and complex procedures are more likely to generate claims -- a point consistent with the data from Japan detailed below.

[2] Federal law apparently requires malpractice payments to be reported to the National Practitioner Data Bank. According to the NPDB, however, only 17,000 claims were paid in 2005 in the U.S. NPDB 2005 Annual Report.

Robert Leflar estimates the number of claims made (not claims paid) in the U.S. at 70,000 per year. Private correspondence.

al., 2005: 333), and collected on 50-60 percent of them. Those in Texas (population 24 million) in 2002 filed 6,929 claims and collected on 5,555 (Black, et al., 2005: 246 tab. 13).

U.S. malpractice claimants litigate about 30 percent of their disputes. At trial, they prevail perhaps 20-30 percent of the time (Mello & Studdert, 2006: 13; Sloan & Chepke, 2008: 165; Bovbjerg & Bartow, 2003: 32).

When successful, U.S. patients (or heirs) collect $150,000 to $310,000 a piece. AON suggests that the average successful claimant collects $178,000 (AON, 2004). In Florida, the median successful claimant in 2003 collected $150,000 and the mean claimant $300,000 (Vidmar, et al., 2005: 338 tab. 6). An insurer trade association reported median 2001 payouts of about $180,000, and mean payouts of $310,000 (Bovbjerg & Bartow, 2003: 27). And Mello & Studdert (2006: 13) estimate the range for 2003 at $260,000 to $310,000.

In wrongful death claims (25-35 percent of the claims; Vidmar, 2005: 340), heirs collect $200,000 to $300,000. In Florida, they received median payments of $195,000 and mean payments of $290,000 (1990-2003; Vidmar, et al., 2005: 340 tab. 7). According to the National Practitioner Data Bank (operated by the Department of Health & Human Services), in 2005 they collected median payments of $175,000 (NPDB 2005 Annual Report).

To protect themselves against these malpractice claims, physicians buy insurance coverage. Premiums vary with the insurance underwriting cycle, location, and specialty. As of 2000, the mean American physician paid a premium of about $18,500 (Bovbjerg & Bartow, 2003: 13). In some states doctors pay more -- the mean physician in West Virginia paid $39,050. And in some specialties they pay more -- in orthopedic surgery (not the field with the highest premiums), in 2002 the mean doctor paid $38,200 in the U.S. as a whole. The mean orthopedic surgeon in Pennsylvania paid $73,300 (id., 15).

Non-standardized and complex, malpractice claims take time to unravel. From the time of the accident to its eventual resolution (litigated and settled claims grouped together), claimants in Florida spent about 3.3 years (Vidmar, et al., 2005: 330-31 tabs. 1, 2). In the U.S. more broadly, according to the National Practitioner Data Bank, they spent a median 4.13 years and a mean 4.66 years (NPDB 2005 Annual Report).

B. Japan -- the Official Court Data::

The administrative office of the Japanese courts (the Supreme Court "Secretariat") does not disclose much about medical malpractice litigation, but it does specify its basic contours: plaintiffs file few claims in court; of the claims they do file, they drop or settle most; if they litigate to a final judgment, they spend about three years in court; and at that final disposition, they win about 30-40 percent of the time.

In 2004, Japanese plaintiffs filed about 1,100 medical malpractice cases. In the same year, the district courts closed about 1,000 (Table 1 Panel A). Low as these number are, they did not represent a decline. Instead, they were nearly twice as large as they had been in 1998. Additional summary statistics appear in Table 2.

[Insert Tables 1 and 2 about here.]

Of these 1000+ suits, the parties litigated to a final (lower-court) judgment about 40 percent. Plaintiffs filed 632 suits in 1998, and the courts adjudicated 232 (Table 1 Panel A). They filed 1,110 in 2004, and the courts adjudicated 405 (40 percent). In the

rest of the cases, either the plaintiffs dropped their claims or the defendants paid out-of-court. These settlement rates track those for civil litigation more generally: the courts closed 149,000 ordinary litigation cases in 2004, but adjudicated only 71,000 of them (48 percent) (Shiho tokei, 2004: tab. 20).

Malpractice claims take longer to adjudicate than the typical civil suit. In 1998, from filing to judgment the courts in malpractice suits took 35 months.[3] By 2004, they had cut that number to 27 months (Table 1 Panel B). Most civil suits take far less time: of the 71,000 suits adjudicated in 2004, the courts closed 76 percent within one year. They closed 97 percent within three (Shiho tokei, 2004: tab. 20).

Plaintiffs recover damages in about 30-45 percent of the medical malpractice cases they litigate to a final judgment (Table 1 Panel B).[4] This is lower than the comparable figure for civil litigation more generally. Of the 71,000 ordinary civil suits adjudicated in 2004, plaintiffs won (in whole or in part) 84.1 percent. Of the 44,000 suits in which they demanded a money judgment, they recovered some amount in 80.9 percent (Shiho tokei, 2004: tab. 19).

C. Japan -- the Scholarship:

Why Japanese patients claim and litigate as they do raises a variety of issues -- some general to civil litigation more broadly, and some specific to medical malpractice.[5] In a perceptive series of studies, legal scholar Robert B. Leflar (2009b: 444-45) focuses on the institutional structure of the courts and the legal services industry. The small number of lawyers (about 24,000), he notes, raises the cost of malpractice litigation. The "delay in case resolution (at least before recent reforms)" reduced its return. The predictability of the damage awards facilitates out-of-court settlement (also Leflar & Iwata, 2005: 2000). And the tendency of Japanese attorneys to demand a non-contingent retainer up-front requires many would-be plaintiffs to front cash they do not have.

By contrast, Hideo Yasunaga (2008: 39-40) of the University of Tokyo Medical Faculty champions cultural explanations. "Japanese people have a tendency to avoid antagonist situations or confrontation," he writes, and prefer "out-of-court settlements for dispute resolutions." Like Leflar, he does note that attorneys are few and delays chronic. But unlike Leflar he characterizes the resulting situation in conspiratorial terms: until the 1990s, the "insidious violations of human rights" in medical practice were "hushed up and concealed."

Like Yasunaga, legal scholar Eric Feldman (2009: 257-58) sees malpractice litigation as a phenomenon that reflects both "Japanese culture" and structural "barriers" that "inhibit access to the legal system." Those structural barriers, Feldman (2009: 259) too sees as something of a conspiracy: "the government's long-standing approach to tort-related claims ... effectively shut the door to tort litigation." And again like Yasunaga,

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[3] Maeda, et al. (2001: 58) find the mean filing-to-judgment times of 3.0 years for 1989-1998.

[4] Hagihara, et al. (2003: 121) find plaintiff recovery rates of 31.8 percent in 1986-98 malpractice cases.

[5] Ramseyer & Nakazato (1999: 70-74) suggested that claims were low because there was little quality dispersion in Japanese medicine, and the courts set the standard of care low enough that few doctors failed to meet it. As the discussion below shows, however, there is indeed quality dispersion in Japanese medicine -- and plaintiffs disproportionately target the doctors offering the highest quality care.

Feldman attributes the low litigation and claiming rates in part to the non-contingent retainer arrangements (id., 264) and the long delays: "in 2006 it still took an average of 25.1 months for the average malpractice case to move from filing to final judgment in the district courts" (id., 269).

Feldman adds two additional structural factors. First, Japanese courts require plaintiffs to "prove the central elements of their allegations" (2009: 263-64). "[B]y requiring plaintiffs to bear the burden of proof in medical malpractice cases," he explains, "Japanese courts effectively limit the number of malpractice claims that can succeed." Second, court awards are not just predictable, but "modest" besides (id., 265). More specifically, "[d]amages in medical malpractice cases in Japan are ... more predictable and more modest than in the United States" (id., 266). By contrast, Leflar & Iwata (2005: 2000) observe that "mean and median awards in U.S. wrongful death cases ... seem not to diverge radically from the Japanese scale of things."

Scholars have discussed several other aspects of the Japanese malpractice disputing environment. Leflar (2009) and Leflar & Iwata (2005: 201), for example, suggest that malpractice insurance premiums in Japan "could be considered a very rough-hewn proxy for liability payouts in the long term." They then observe (2009: 8 n.28) that physician members of the Japan Medical Association (JMA) obtain their coverage for 70,000 yen, and general hospitals for about 30,000 yen per bed.[6] Other discussions of the malpractice insurance industry include Nakajima, et al. (2001), Kinoshita (2007), Yamashita (2008), and Miyasaka (2002).

Prosecutors in Japan bring criminal charges against physicians for the most egregious cases of malpractice. Leflar (2009) and Leflar & Iwata (2005) carefully explore the possibility that criminal sanctions may fill a gap in incentives left by the scarcity of private litigation. They note that prosecutors bring few claims, but observe that they obtain broad news coverage for the few they do file. Criminal prosecutions for malpractice are also discussed in Sawa (2008).

Two papers examine unpublished as well as published decisions in malpractice cases. Maeda, Sakamoto & Nobutomo (2001) study 310 malpractice cases from 1989-1998 in the major district courts (importantly, including Tokyo and Osaka). Like Leflar, Yasunaga, and Feldman, they attribute the low litigation rate to the delays and attorney fee structure. Hagihara, Nishi & Nobutomo (2003) examine 435 cases from 1986-1998 in the major district courts (apparently a database that overlaps with that of Maeda, et al.). They find that 47 percent of the cases involved wrongful-death claims, that 32 percent resulted in a plaintiff recovery, and that the successful claimants in the wrongful-death cases collected a mean 28 million yen.

Other studies focus more narrowly on specific medical procedures or issues. Hiyama, et al. (2006), examine malpractice claims over endoscopies, for instance, while Shimada & Kato (1994) survey anesthesia-related claims. Hamasaki, Takehara & Hagihara (2008) and Aoki, et al. (2008), both study doctor-patient communications in malpractice disputes.

D. Other Comparisons:

[6] A similar suggestion appears in Ramseyer & Nakazato (1999: 69-70).

Perhaps because malpractice in most societies outside the U.S. involves small aggregate transfers, we know less about the claiming processes in other countries. In most advanced democracies, patients file far fewer claims than in the U.S. But -- importantly given the focus of this paper -- in most of these countries the government also more closely controls the medical services industry.

The U.K. and Canada couple a universal health care program with legal systems otherwise similar to that in the U.S. Both have little malpractice litigation. In the U.K., the National Health Service estimates its annual expenditures for malpractice at $642 million (fiscal 2001-02, on a population of 59 million; Wheat, 2005). In Canada, on a population of 32 million, plaintiffs filed 1,083 malpractice suits (in 2004; CHSRF, 2006). Trebilcock, Dewees & Duff (1990: 542) estimate that "the average frequency of claims filed against physicians in the U.S. is about five times greater than in Canada."

In several other advanced democracies, the government has displaced the tort regime from malpractice entirely. In New Zealand, Sweden, Denmark and Finland, for instance, it has imposed no-fault instead (OECD, 2006: 13-14).

II. The Japanese Health Care Industry

A. Universal Health Insurance:

The Japanese government offers universal health insurance, and does so at low cost. Although it purports to cover nearly all citizens for nearly all care, the program costs barely 8 percent of GDP. By contrast, the U.S. spends 15 percent or more of its GDP on health care, and even France and Germany spend 10 and 11 percent (Nihon Iryo, 2007).

The Japanese universal insurance program dates from the late 1950s (Ramseyer, 2009). Facing electoral challenges from a socialist and communist left, the conservative ruling party folded existing health insurance programs into a national insurance plan. Formally, the "plan" was not one but several. It allocated residents to different programs by their age and employment status. Employees in large firms it registered in one set of plans, for example, and those in small firms in another. The employees of the large firms it insured with private insurers, the self-employed with municipal governments (Kameoka, 2005: 8-13).

Through these plans, the Japanese government claims to cover all residents against the cost of most major medical problems. According to political scientist John Campbell and health care specialist Naoki Ikegami (1998: 1-2), "[v]irtually the entire population is included in mandatory health insurance." Through the insurance, the government "covers nearly all regular health care."

B. Service Providers:

The 270,000 physicians (2.0 per 1000 population compared to 2.3 in the U.S.) who provide the services under the Japanese universal plan fall broadly into two groups: (a) the men and women who run the small, often low-quality clinics, and (b) the doctors who staff the larger hospitals and sometimes offer very high quality care. About a third of all Japanese physicians work in the private clinics. Defined as institutions with fewer than 20 beds, these are small private affairs. The senior doctor either owns the clinic directly or (effectively) owns it through a non-profit organization he controls.

Of all practicing doctors in Japan, 93,000 work in one of these the small clinics (Kosei, 2006: tab. 2-46). Seventy-one thousand own their own clinic, and another 22,000 work for someone else. Having invested heavily in their clinics, eventually they often transfer them to their sons or daughters.[7] Depending on the clinic's size, the physician may also hire one or two nurses, and a receptionist. Sometimes, he will employ a pharmacist on staff and sell the drugs he prescribes. He will not have admitting privileges at a larger hospital.

Most of the remaining physicians work as salaried employees at the larger hospitals (Kosei, 2006: tab. 2-46). The most sophisticated work at the hospitals associated with elite medical schools. Others practice at the larger hospitals run by national, prefectural, or municipal governments. Still others work at the hospitals operated by major charitable organizations like the Red Cross.

C. The Political Economy:

The government sets its prices through negotiations with the physician trade association. Every other year, representatives of the Ministry of Health, Labor & Welfare (MHLW) negotiate a fee schedule with the JMA (Campbell & Ikegami, 1998: ch. 6). The JMA, in turn, advances the interests of the clinic doctors. It may include only 61 percent of all Japanese doctors, but it includes virtually everyone who runs a clinic.[8]

By all accounts, the government sets prices low, but low in a way that favors the clinic doctors over their hospital competitors. According to Campbell & Ikegami (1998: 147), it sets the prices at about one quarter of the level the service would cost in the U.S. Crucially, it also skews the prices in ways that divert revenue away from doctors who invest in specialized expertise. It diverts revenue toward those who invest in the small clinics.[9]

As Campbell & Ikegami (1998: 84, 173-74) explain it, the government "makes inexpensive primary care relatively profitable and expensive high-tech procedures unprofitable." This "[c]ontinued domination by the JMA" of health policy, Campbell & Ikegami (1998: 174) write:

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[7] Given the difficulty their children sometimes have in gaining admission to medical schools, several private schools function -- effectively -- as schools of last resort for the not-very-bright offspring of very wealthy clinic owners. Teikyo University in Tokyo, for example, demands tuition and fees of 14.2 million yen in the first year. Over the six years of medical school education, it collects tuition and fees of about 49.2 million.

[8] Data on total physicians from Kosei (2006) for 2004; data on JMA membership from its webside, www.med.or.jp for 2006. See Ramseyer (2009).

The political economy of the domination of the JMA by the owner-physicians rather than the staff-physicians is reasonably straightforward. First, the owner-doctors own a larger capital investment, and its value hinges on government policy and regulation. Second, because many of the staff-doctors plan eventually to build their own clinic or hospital, they stand at a transitional stage in their career. Notwithstanding this domination by owner-physicians, the JMA continues to work to bring staff-doctors within its ambit. See, e.g., Fukuda (2007: 188); Takeda (2008).

[9] To be sure, relative prices are something of a moving target -- and the clinic physicians may steadily be losing influence on policy. The basic pricing advantage to simple, low-tech procedures, however, remains.

> [has] left hospital services, especially high-tech medicine and nursing, poorly reimbursed, with no provision for capital investment or administrative overhead. ... [O]ffice-based physicians and the government have become de facto allies in maintaining the status quo by preventing the encroachment of hospitals and the expensive high-tech medicine that they promote.

Long the single largest donor to the ruling Liberal Democratic Party,[10] the JMA uses its power in ways that extend beyond the price schedule. Through the regulatory structure, it maintains a variety of anti-competitive restraints:[11] caps on new beds in a locality, advertising restrictions, higher fees for patients who try to consult with a sophisticated hospital without first visiting a small clinic, and bans on corporate hospital ownership.

Informally, the government often capitulates to local physician opposition to the construction of larger and more sophisticated hospitals.[12] American physicians lobby for municipal hospitals because they need places to admit their patients. JMA physicians face no such incentive. Instead, they earn the most if they keep their patients out of the hospital and in their own clinic. To them, a community hospital is simply a more sophisticated competitor for their most lucrative customers. Often, they fight plans to build new municipal hospitals in their cities. Often, the government defers.

D. Consequences:

1. Not preventive care. Perhaps the health-care debate in the U.S. leads readers to think that the skewed pricing structure in Japan might improve primary care. Perhaps it leads them to think that the shift away from technology toward office visits might promote "preventive" medicine.

At least in Japan, the skewed pricing does neither of these. Because the government sets even primary care prices below market-clearing levels, doctors relentlessly depreciate quality (Ramseyer, 2009, 2010). The insurance program pays them per visit, so they keep visits short and see as many patients per day as possible.[13] It pays them for medication, so they prescribe and sell large amounts of drugs. It reimburses in-patient care at high levels, so they keep patients far longer than in the U.S. or western Europe.[14]

The insurance does not promote preventive care for a simple reason: it does not cover it. The insurance covers only treatments for accidents and disease, and preventive

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[10] The domination of medical policy by the JMA is famous. See, e.g., Campbell & Ikegami (1998: 32; see also Ouchi, 2005: 129).

[11] See Kokuritsu shakai (2006: 428 tab. 229) (bed caps), Iryo ho [Medical Services Act], Law No. 205 of 1948, Sec. 6-5 (advertising restrictions), Yashiro, et al. (2006: 28) (surcharge on hospital visits), Iryo ho, supra, at Sec. 7(3) (corporate ban).

[12] For examples of the way local medical associations fight the construction of new hospitals, see the controversy in the Musashimurayama area, detailed at http://www1.neweb.ne.jp/wb/misikai/sub8.html, and the controversy in Kannondera city, detailed at http://www.shikoku-np.co.jp/feature/tuiseki/003/index.htm. The JMA also worked to promote regional limits on hospital beds, as described earlier in the text. See Campbell & Ikegami (1998: 67).

[13] The popular Japanese adage is "to wait 3 hours for a 3 minute consult." Discussed more fully at Ramseyer (2010).

[14] The mean in-patient stay in Japan is 36.3 days. The comparable figures for the U.S., U.K., Germany, and France are 6.5, 7.2, 10.4, and 13.4. See Ramseyer (2010).

care falls under neither. Many middle-class Japanese do obtain excellent preventive care, but they pay for it in cash. For the popular batteries of periodic tests called "human docks," they pay 40,000 to 100,000 yen.[15]

2. Not health. -- Then again, perhaps readers attribute Japanese life expectancies to medical care. Japanese do live long. At birth, white American males can expect to live 75 years (females, 80). Japanese males can expect to live 79 (females, 86). Even at age 40, Japanese men face a life expectancy of another 40 years (women, 46) while white American men face only 38 (women, 42).

Life expectancy depends on many factors, however, of which sophisticated medical care is but one. Of those factors, it is not even the most important. Clean water, sanitation, and treatments for infectious diseases all matter too (Cutler & Miller, 2004; Cutler, et al., 2006), and on these factors the U.S. and Japan do not markedly differ. Smoking matters as well -- and Japanese do still smoke more than Americans.

But food and exercise also matter. Japanese eat less saturated fat, and eat less generally. Given urban geography, they walk much farther. As a result, they stand considerably trimmer than most Americans. Among Americans, 34.1 percent are overweight (BMI of 25-30) and 32.2 percent are obese (BMI over 30). Among Japanese, only 20.3 percent are overweight and barely 3.1 percent obese (WHO, 2008).

Excess weight takes a large toll. By age 40, an overweight man can expect to live 3 fewer years. An obese man can expect 7 fewer (Peeters, et al., 2003). As Comanor, Frech & Miller (2006: 22; see also Frech, 2008) put it, "the relatively poor health outcomes reported for the United States result from a particular risk factor prominent in the U.S.: high obesity rates." The longer lifespan in Japan than in the U.S. does not reflect better medical care. In part, it merely reflects the choices people make about calories-in and calories-out.

3. Not specialized expertise. -- The universal health insurance does insure that doctors not specialize. Effectively, it eliminates any financial incentive for them to do so. Because the universal coverage boosts demand while the licensing regime cuts supply, Japanese physicians can fill their days at government rates. They will fill their days at government rates if they spend years acquiring specialty and subspecialty skills. And they will fill their days at government rates if they invest in no specialty training at all.

Predictably, most Japanese doctors choose not to acquire specialized expertise. They do what they must for their basic license, but no more. Of the 19,000 JMA members in Tokyo (56 percent of all Tokyo doctors), barely 1,100 are board-certified. Earning no returns to specialization, those at the clinics treat (virtually) any ailment a patient might bring. Typically, they advertise services in multiple fields. Often, they advertise services in completely unrelated fields like internal medicine and surgery (Ramseyer, 2010).

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[15] The phrase refers to the process of hooking the patient up to a series of diagnostic machines -- much like a ship docked at a harbor. The session provides a long battery of tests for diseases that hit the middle-aged. The tests are not covered by the national insurance. For shorter versions that take one day, the fees run 40,000-60,000 yen; the two-day sessions run 50,000-100,000 yen. See http://www.medicapark.com/knowledge/dock_bean03.html. Some insurance programs may cover these tests.

4. Not sophisticated procedures. -- As noted earlier, moreover, the Japanese insurance program also cuts the number of doctors and hospitals who offer the more sophisticated and complex procedures: bypass operations and angioplasty for heart disease, for example, carotid angioplasty and endarterectomy to prevent strokes, or the complex operations and chemotherapies for cancer. Potentially, these technologically intensive procedures can save lives. Although a few early studies suggested that some brought only modest returns (McClellan, McNeil & Newhouse, 1994), more recent work indicates that -- when used appropriately -- they can generate large benefits.[16]

Japanese doctors perform these complex procedures far less often than their U.S. peers. In 2005, for instance, American doctors performed 469,000 cardiac bypass (coronary artery bypass graft; CABG) operations and 1.27 million angioplasties. Although Japan had about a quarter the number of deaths from heart disease, Japanese doctors performed less than 3 percent of the U.S. bypass operations (12,000), and less than 6 percent of the angioplasties (70,000-100,000).[17]

The Japanese government cuts its cancer treatment costs by refusing to license the new chemotherapy drugs.[18] Pharmaceutical research is expensive. Even as the industry develops ever-more-effective chemotherapy regimes, it has paid for the research with ever-higher prices. When proven effective, the U.S. government has approved these drugs for use. Nominally out of safety concerns, however, many of them the Japanese government has refused to approve for its insurance coverage.

Denied access to the most effective treatment regimes, more and more Japanese cancer patients simply abandon the universal insurance. They cannot formally abandon it, of course. But rather than make do with its limited chemotherapy options, they turn to a growing group of oncologists who offer the new (U.S.-licensed) treatments on a cash basis.

In part to help Japanese plan for their possible off-universal-insurance chemotherapy needs, an increasing number of insurers offer specifically "cancer insurance." Aflac was said to dominate the market. In 2007, it alone sold 639,000 new cancer insurance policies. At least eight other firms offered the insurance as well.[19]

III. Data

A. The Databases:

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[16] The literature is massive, but a few of the studies include, e.g., Cutler (2007); Hemingway, et al. (2001, 2008); Faxon (2008); Normand, et al. (2001); Guadagnoli, et al. (2000). Obviously, they do not always generate benefits. The procedures themselves carry risks, and when not medically indicated the expected benefits do not outweigh those risks.

[17] Japan figures: Sezai, et al. (2007) and Yomiuri (2008) on number of bypass operations; Yomiuri (2008) and Shukan Asahi (2008) on number of angioplasties. U.S. figures: American Heart Association (2008).

[18] For a list of the licensed and unlicensed chemotherapy drugs, see www.cancerinfo.tri-kobe.org.

[19] Aflac sold 1.4 million new policies (of all types) in 2007. See 2007 Annual Report, Afurakku no genjo, 2008 [The Present State of Aflac, 2008], at 6, available at www.aflac.co.jp. A web search in mid-2008 disclosed at least 8 other firms offering cancer insurance: Mitsui-Sumitomo Marine, Tokyo Marine, Sonpo Japan, Secom sonpo, AIG, AIU. American Home Direct, and Zurich.

To examine malpractice disputes in detail beyond that disclosed by the administrative office of the courts, I examine all judicial decisions published in the course of a decade. More specifically, I code every district court opinion published from 1995 to 2004 that appears in a search for "medical malpractice" in the "Hanrei taikei" database.[20] This yields a population of 351 opinions, 348 civil and 3 criminal. With this information, I produce two datasets: a case-level database, and a prefecture-level database.

B. The Variables:

1. Case-level database. --

I code each opinion for the following variables. Summary statistics appear in Table 3.

[Insert Table 3 about here.]

a. Financial.

Award Value: the total amount awarded to the plaintiff.

Demand Value: the total amount demanded by the plaintiff.

b. Delays.

File-to-Judgment: Number of years from the year of filing to the judgment, provided filed within 3 years of accident.

Accident-to-Judgment: Number of years from the year of accident to the judgment, provided filed within 3 years of accident.

c. Recovery.

Plaintiff Recovers: 1 if the plaintiff recovered at least some amount in damages; 0 otherwise.

No Causation: 1 if the court found that the defendant did not fully cause the accident, that the defendant did not fully cause the patient's damages, or that the patient was partially negligent as well; 0 otherwise.

d. Patient.

Male: 1 if the patient is male; 0 otherwise.

Death: 1 if the patient died from the accident; 0 otherwise.

Age: the age of the patient at the time of the accident.

e. Accident.

Misdiagnosis: 1 if the wrongful act involved a misdiagnosis; 0 otherwise.

Medication Error; 1 if the wrongful act involved a medication error; 0 otherwise.

Surgery: 1 if the wrongful act involved surgery; 0 otherwise.

Obstetrics: 1 if the wrongful act involved obstetrics; 0 otherwise.

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[20] That is, under "jiko," I search for "iryo kago." Hanrei taikei is published by the Dai-ichi hoki firm. 18 cases that appeared in the search were dropped as not involving malpractice.

Emergency Room: 1 if the wrongful act took place in an emergency room; 0 otherwise.

Cardiac Care: 1 if the wrongful act involved cardiac care; 0 otherwise.

Cerebrovascular: 1 if the wrongful act involved cerebrovascular disease; 0 otherwise.

Cancer: 1 if the wrongful act involved cancer; 0 otherwise.

f. Institution.

University Hospital: 1 if the wrongful act took place at a university hospital; 0 otherwise.

Government Hospital: 1 if the wrongful act took place at a government (but not university) hospital; 0 otherwise.

Red Cross Hospital: 1 if the wrongful act took place at a red-cross hospital; 0 otherwise.

Other Public Hospital: 1 if the wrongful act took place at any other public hospital; 0 otherwise.

Private Hospital: 1 if the wrongful act took place at a private hospital; 0 otherwise.

Dental Clinic: 1 if the wrongful act took place at a dental clinic; 0 otherwise.

Clinic: 1 if the wrongful act took place at a clinic; 0 otherwise.

g. Other.

Post 2001: Suit was filed in 2001 or later.

Year suit filed, year of accident, and geographical dummies for the most often used district courts.

2. Prefecture-level database. --

At the prefecture-level, I calculate the following variables:

Suits: Number of malpractice suits filed in the prefecture, 1995-2004.

Population: Population, 2005.

% Population over 64: Percentage of population age 65 or older.

% Agricultural Econ: Value of agricultural output, divided by prefectural GDP

Density: Population per square kilometer.

GDP PC: Prefectural GDP per capita, in billion yen.

Hospital Beds: Number of hospital beds (MHWL, 2008).

Clinic Beds: Number of clinic beds (MHWL, 2008)

Medical School: Number of medical schools.

Cardiac Bypass: Number of hospitals performing more than 100 heart surgeries (including cardiac by-pass operations but not catheterization) in 2007 (Asahi, 2009).

Attorneys: Total number of attorneys, 2004 (Nihon, 2005).

3. Instruments. -- As instruments for the number of attorneys per prefecture (see Sec. IV.A.2(b)), I add:

Museums: Total museums in prefecture (including zoos, aquariums, etc.), 2002 (Toba, 2005).

Concerts: Percent of population (10 years old or older) who attend music concerts (for reasons not explained, the source excludes classical concerts), 2001 (Toba, 2005)

School Internet: Percent of public schools with high-speed internet access, 2003 (Toba, 2005).

College Grads: Percent of population who graduated from a university, 2000 (Toba, 2005).

C. Biases:

1. Introduction. -- Like Lexis and Westlaw, the Hanrei taikei purports to include all published opinions. Some of these opinions appeared in one or more official (often subject-specific) court reporters. The rest appeared in the private reporters.

My database is biased. Whether a collection of all published malpractice opinions might be biased is not the question: clearly, it is. Publication introduces one obvious bias. The administrative office of the courts decides which opinions to publish officially. Staffed by elite career judges, the office presumably publishes those opinions that its members think (among other things) provide proper precedential direction. By contrast (and not to put too fine a spin on it), the publishers of the private reporters are in the business of selling magazines. They include those opinions that they think will boost subscription rates.

The very fact of litigation introduces a second bias. We have known at least since Priest & Klein (1984), that litigated cases -- whether published or no -- are not a random sample of all disputes. Instead, they represent those disputes that the parties chose not to settle out-of-court. Given that the vast majority of disputes settle, those that do not will potentially differ along several important dimensions.

Consider, then, some evidence about the direction and magnitude of the biases involved.

2. The published malpractice opinions represent a larger fraction of the underlying court cases than other published civil opinions. From 1998 to 2004, the Japanese courts issued 2,298 civil judgments in medical malpractice cases (summing Table 1 Panel A Column (3)). During the same period, the various reporters published 229 (10.0 percent; summing Column (4)).

By contrast, in 2004 court reporters published only 1.9 percent (1358) of all civil judgments. If I exclude default judgments, they published 3.0 percent (from Hanrei taikei data base; Shiho tokei, 2004: tab. 20). Apparently, reporters publish about five times as many malpractice opinions as civil opinions more generally. Restated, the published malpractice opinions represent a bigger fraction of court decisions than the published opinions in other fields.

3. The plaintiffs in the published malpractice cases win more often than malpractice plaintiffs generally. -- According to Panel B of Table 1, the fraction of cases that the published-opinion plaintiffs won rose from 65-75 percent in 1995-2001 to over 90 percent by 2003. During the same period, plaintiffs in malpractice cases as a whole -- published and unpublished -- won only 30 to 45 percent. Recall from Section I.A., above, that plaintiffs in U.S. malpractice cases win about 20-30 percent.

Hypothetically, the high plaintiff win-rate in the published cases might reflect a desire among the elite judges in the administrative office to encourage malpractice claims. In fact, it does not. The official reporters nearly boycotted the malpractice field. During the ten years involved, they published only fifteen opinions in civil malpractice opinions. Among them, the plaintiffs won only eight.

The high plaintiff win-rates instead track the editorial bias at the commercial reporters. Perhaps the editors liked malpractice opinions, but thought plaintiff losses bored their readers. Apparently, they decided that plaintiff victories offered subscribers a "better read" than plaintiff losses. Among the 337 cases in the private reporters, plaintiffs won 75.4 percent.

4. Wrongful-death claims constitute a slightly higher percentage of the published malpractice cases than the unpublished. -- Among the published cases, 59.5 percent involved patients who died (Table 4). For all malpractice cases, the administrative office does not release the comparable fraction. Nonetheless, Hagihara, Nishi & Nobutomo (2003) study all malpractice decisions (435) in ten district courts over 1986-98. Examining both published and unpublished decisions, they find that 47.0 percent involved deaths. Apparently, the published opinions involve disproportionately many death claims.[21]

[Insert Table 4 about here.]

5. Plaintiffs disproportionately sue in Tokyo and Osaka, as the published-opinion database reflects. -- The administrative office of the courts does not disclose where malpractice plaintiffs bring their claims. In what seems the same procedure as Hagihara, Nishi & Nobutomo (2003), however, Maeda, Sakamoto & Nobutomo (2001), survey all (published and unpublished) malpractice cases from 1989-1998 for ten district courts (excluding Yokohama). They do disclose the number of cases from each court, and I report the numbers in Table 1 Panel C Column (3).

Disproportionately, malpractice claimants sue in Tokyo and Osaka. According to the Maeda, et al. database, they filed 41 percent of all malpractice cases in Tokyo and 27 percent in Osaka. Among civil cases more generally, plaintiffs filed only 21 percent in Tokyo and 9 percent in Osaka (Column (2)).

If anything, published malpractice opinions disproportionately include cases not from Tokyo or Osaka. Only 31 percent of the published cases come from Tokyo and 16 percent from Osaka (Column (1)). Recall, however, that Maeda, et al., only survey 10 district courts. Tokyo and Osaka cases are a larger fraction of their universe -- but their universe includes fewer than all courts.

For the most part, any geographical bias may not matter. Other than on time-to-judgment (see Subsection 6, below), the courts seem not to differ on any dimension measured here.[22] Indeed, Hagihara, et al. (2003: 121) assert that "there are no reports on regional differences in medical malpractice decision-making" among the different courts.

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[21] Alternatively, of course, the difference could reflect the differing time periods at stake.

[22] As explained below (Sec. xx), however, Japanese courts do hold doctors to a standard of care that varies in part by the local environment.

The published-opinion dataset seems largely to confirm the Hagihara, et al. claim (Table 5). Whether on the likelihood of recovery or the amount of damages received, the differences among the various courts are largely insignificant.

[Insert Table 5 about here.]

6. The published malpractice cases take longer to adjudicate than the unpublished malpractice cases. -- The plaintiffs in the published cases litigate longer than those in the unpublished cases. According to Table 1 Panel B, from 1998 to 2004, filing-to-judgment times for malpractice cases as a whole fell from about three years to two. During the same period, the filing-to-judgment times among the published cases fell, but remained higher: from about 4.5 years to 3.5.

The longer times-to-judgment in the published opinion database may reflect in part the slightly smaller fraction of Tokyo and Osaka cases (see Subsection 5, above). Concerned about the length of time malpractice cases took, in April 2001 the district courts in Tokyo and Osaka introduced panels that specialized in medical malpractice cases (Yamana & Oshima, 2003: 14). Several other district courts later followed.

Apparently, these specialized panels do speed the process. In Table 5 Column (3), I regress time-to-judgment on the geographical variables. Parties that litigate their malpractice case in Tokyo can expect a decision nearly a year earlier than those who litigate it in one of the courts not listed.

The longer filing-to-judgment times among the published cases probably also reflects the higher stakes involved. In my Table 5 regression, I regress time-to-judgment on (inter alia) the amount the plaintiff demanded. The resulting coefficient is both positive and statistically significant.

7. The published malpractice cases involve medical procedures similar to those among malpractice cases generally. -- Though not comprehensively, the administrative office does disclose some information about the types of medical procedures that generate the malpractice suits. Of the 2005 suits, for example, 39 percent involved surgery. Fourteen percent involved obstetrics or gynecology (see Table 2 Panel A).

The plaintiffs in the published opinions sued on a similar mix of suits. Of these opinions, the plaintiffs in 46 percent sued on surgical procedures. Fifteen percent sued on obstetrical or gynecological procedures.

8. Addendum: Comparison to settled cases. -- a. Yoshikawa. In 2006, prominent malpractice plaintiff's attorney Kozaburo Yoshikawa published a book detailing 45 malpractice cases he had settled (Yoshikawa & Makabe, 2006). Over the course of his career (1978-2005), he explained, he had fielded about 510 inquiries from clients or potential clients. Of those, he had pursued about 100. The rest he had concluded showed too low a probability of success. Of those 100+ cases, he then detailed the major cases that resulted in a plaintiff recovery: 45 cases that settled, and 12 cases that went to a court decision.

Given the obvious incentive facing Yoshikawa to exaggerate his career success, these cases are decidedly non-random. That said, he reports:

* Of the 45 cases, 26 (58 percent) involved death claims (published opinion database: 59 percent).

* Fifty-three percent of the claimants were male, with a mean age of 42 (published opinion database: 54 percent male, with a mean age of 36).
* The plaintiffs in the wrongful-death cases received settlements that ranged from 2 million yen to 80 million, with a mean of 29.7 million yen and a median of 30 million. Of the six cases with sub-10-million-yen recoveries, three were cancer cases (hence plaintiffs with a low life expectancy) and two involved patients over age 70 (published opinion database: recoveries of 200,000 yen to 189 million, with a mean of 40.6 million yen and a median of 37.5).[23]
* The nineteen claimants with non-death claims received settlements that ranged from 5 million yen to 70 million, with a mean of 40 million and median of 50 million (published opinion database: 200,000 yen to 205 million, with a mean of 43.6 million and a median of 20.7 million).

b. Tokyo District Court. Other evidence does indeed suggest that Yoshikawa's settled cases probably represent unrepresentatively generous settlements. The Tokyo District Court examined all cases in its malpractice panel that settled during April 2001 to September 2002 (Tokyo, 2003: 35-36, 45). In Table 6, I compare these settlements with the comparable statistics for the published opinion database.

[Insert Table 6 about here.]

Note two facts about these settlements. First, the plaintiffs settled for a smaller fraction of the amounts they demanded than the litigating plaintiffs eventually obtained. Of the settling plaintiffs, 36 percent obtained at least half of their demand. Of the published opinion plaintiffs, over 51 percent did. This is of course exactly what one would expect if parties settled for amounts that reflected a discount for their likelihood of recovery.

Second, the settling plaintiffs obtain relatively small amounts. Only 27 percent of the settling plaintiffs recovered 20 million yen. Of the published opinion database, a full 58 percent did. This too is what one would expect if settling plaintiffs discounted their expected recovery by the likelihood of success.

IV. Litigation Targets

A. Introduction:

With this data, I explore several related questions: (1) Whom do Japanese plaintiffs sue (Subsection B)?; (2) How much do they collect (Subsec. C)?; (3) Why do the patients sue the doctors that they do (Subsec. D)?; (4) Overall, how much claiming occurs (Sec. V)?; and (5) Why are claiming levels as low as they are (Sec. VI)?

B. Whom Do Patients Sue?

1. University professors, not private doctors. -- Japanese patients sue their university professors; they less often sue the clinic doctors.[24] University hospitals

[23] Given the high cancer mortality rates, Yoshikawa & Makabe (2006: 113) noted that recoveries were low in cancer cases.

[24] I cannot rule out the possibility that the clinics and hospitals have different settlement practices. These data are consistent, for example, with a world where clinic doctors settle most of the claims against them, while the universities refuse to settle and litigate instead.

contain 6 percent of all beds; their physicians defend 18 percent of all malpractice suits. The small private clinics and hospitals supply 55 percent of all beds; their doctors defend barely 41 percent of the suits (Table 2, Panel B). Were plaintiffs suing over low-quality care, they would sue the doctors running the clinic-mills. Instead, they sue the sophisticated specialists at the university hospitals.

In suing the university doctors, Japanese patients are not suing their worst doctors. They are suing their best -- albeit high-quality doctors who have made negligent mistakes. After all, as in the U.S., the physicians at the university hospitals represent the very brightest doctors, the top of the medical quality distribution.

The doctors who staff the university hospitals attended the most competitive universities. They performed at levels that earned them a position on a university hospital staff. Despite the lack of financial incentives, they trained for years in their specialty, and often in a subspecialty (sometimes at U.S. hospitals). And the best of them provide care as sophisticated as anything available anywhere in the world.

At the other extreme are the clinic doctors. Because of the national health insurance payment schedule, a third of the doctors in Japan choose to operate these rudimentary private clinics. They keep a few beds, and hire a nurse and a pharmacist. They then run as many patients through the clinic as they can. Paid by the visit, they make them return time and again. They keep them hospitalized for long periods. They sell them large quantities of drugs.

These clinic doctors do not specialize. Instead, they hold themselves out as <u>both</u> internists and surgeons, and treat whoever walks in the door. Many of them inherited their clinics from their parents, and attended bottom-tiered medical schools. Primarily because of the large tuition difference (and with a few notable exceptions), most of the medical schools associated with the public universities are more selective than most of the private medical schools.[25] Yet while private schools graduate 39.5 percent of the physicians each year, they educate most of the Tokyo clinic owners.[26]

2. <u>Hospitals, not clinics</u>. -- To explore further the identity of the doctors whom patients sue, in Table 7 I regress the number of malpractice cases in a prefecture (published opinions, 1995-2004) on several sets of prefecture-level independent variables.[27] In Column (1), I regress the number of suits on the number of hospital beds and clinic beds. The message is simple: in a race between the number of hospital beds and clinic beds, hospital beds win. Sophisticated care generates malpractice claims, simple care does not: the greater the number of hospital beds in the prefecture, the

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The litigation and settlement of the claims against the clinic doctors would be controlled by the casualty insurance firm underwriting the medical association's liability policy; the litigation and settlement of the claims against the (self-insured) university hospital would be controlled the senior officers of the university.

[25] See, e.g., http://daigaku.jyuken-goukaku.com/nyuushi-hensati-ranking/igakubu/

[26] Take the Tokyo JMA members at the most active phase of their career -- those born between 1955 and 1967. Of those operating private clinics, 72.5 percent attended a private school. Database prepared for Ramseyer (2010).

[27] Elsewhere, I add the number of attorneys to the regression. I omit Okinawa in these estimates because of lingering differences in the structure of the legal services industry caused by the long American occupation of the islands.

greater the number of malpractice suits; the greater the number of clinic beds, the lower the number of malpractice suits.[28]

[Insert Table 7 about here.]

3. Complex medicine, not simple. -- Similarly, in a horse race between complex care and simple, complexity wins. In Column (3) of Table 7, I regress the number of suits on the number of medical schools in the prefecture. Because the university hospitals specialize in the highest-risk patients, the most difficult diseases, and the most complex, technology-intensive medical procedures, the number of university hospitals proxies for the level of medical sophistication generally. Again, the message is simple: the more medical schools in a prefecture (the higher the level of medical sophistication), the more malpractice suits. The coefficient on the number of clinic beds remains significantly negative.

In Column (5), I regress the number of suits on the number of hospitals in a prefecture doing more than 100 CABG operations. CABG operations do not themselves generate more than a few malpractice claims. Because of their difficulty, however, they proxy for the level of medical sophistication in a community. The CABG operation is extraordinarily difficult, and prefectures that do more of them will also do more sophisticated medicine generally. Once again, the result is simple: the greater the number of hospitals doing a substantial number of CABG operations (the higher the level of medical sophistication), the greater the number of malpractice suits. Again, the coefficient on the number of clinic beds remains significantly negative.

Because plaintiffs file 30 percent of all malpractice suits in Tokyo, Tokyo could -- hypothetically -- drive these results. It does not. In Columns (2), (4) and (6), I run the same regressions without Tokyo. The results remain largely unchanged.

C. What Do They Collect?

1. $400,000 lives. Among the plaintiffs in the published-opinion database, 74 percent recover some amount. As noted earlier, the same is not true of most malpractice plaintiffs. In 2004, plaintiffs filed 1,110 suits. They pursued 405 to judgment, and in those 405 only 40 percent of the plaintiffs recovered anything (Table 1).

Among the published-opinion plaintiffs who collected some amount, recoveries ranged from 200,000 to 205 million yen, with a mean of 41.8 million and a median of 32.9 million -- at the approximate exchange rate of 100 yen per dollar, a mean of $420,000 and a median of $330,000. In wrongful death cases, the awards ranged from 200,000 to 189 million, with a mean of 40.6 million and a median of 37.5 million. As in the U.S., wrongful-death claims do not generate the highest recoveries. Instead, the long-term disability claims do.

Table 8 Panel A gives the ten highest awards. Seven of the ten involve disability claims, and three involve wrongful death. The highest award was 205 million yen ($2.1 million), and the highest wrongful-death award was 189 million ($1.9 million).

[Insert Table 8 about here.]

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[28] The result is not entirely robust. If I both add the number of attorneys as an independent variable and exclude Tokyo, the coefficients on the two bed variables become insignificant. See, e.g., Column (3), Table 10.

2. Predictably valued lives. -- In Table 5, I take those published opinions in wrongful-death cases that yielded a plaintiff recovery and regress the award on the geographical variables, the plaintiff's sex, age, age-squared, whether the plaintiff died, and whether the doctor caused the entire loss. The results indicate that male losses average 15.4 million yen more than female losses. The **Age** and **Age Squared** coefficients suggest that the value of life rises initially, and then declines (compare Table 9 Panel B Column (3).

According to the opinions themselves, the judges calculate wrongful-death awards by present-valuing a decedent's expected earnings. They then subtract about half for foregone maintenance, and add a standard amount for pain and suffering. As Leflar (2009: 445) and Feldman (2009: 265-66) rightly explain, this is the formula judges developed to standardize damages in automobile accident cases.

The opinions confirm the judges' descriptions of what they do. Largely, they value a life by present-valuing the decedent's lost earnings -- hence the differences by sex and age. In Columns (1) and (2) of Table 8 Panel B, I use sex-specific average earnings figures to calculate the value of life for men and women according to the ostensible judicial formula. The numbers peak at about age 30 for men at 73 million yen, and at age 20 for women at 53 million yen.

To compare these formula-based figures with the actual results in the published opinions, I separately regress the damages awarded on **Age** and **Age Squared** for men and women. I then use the calculated coefficients to estimate the point values for various ages.[29] As a comparison of Columns (1) and (2) with (3) and (4) shows, the values are close -- generally within 5-10 million yen of each other. The observed mean values in Table 4 Column (4) are lower only because the published opinions include a large number of older victims (Table 2 Panel C).

The similarity between the ostensible formula-based figures in Table 8 Columns (1) and (2) and the actual regression-based point estimates in Columns (3) and (4) suggests two implications. First, these value-of-life estimates are not an artifact of publication-bias. Hypothetically, the private court reporters might have chosen to publish the opinions that awarded unusually high amounts. Instead, the judges in the published opinions awarded amounts that track the amounts predicted by the official formulae. Courts invoke the formulae as the proper way to value human lives; the regressions suggest they do what they say.[30]

Second, in 1989 Ramseyer & Nakazato argued that the routinized traffic-accident damage formula facilitated settlement in Japanese litigation. Maybe in traffic accidents, some critics replied, but automobile accidents are exceptional (Foote, 1995; Riles & Uchida, 2009: 8). If traffic accidents are exceptional, however, they are no more so than medical malpractice. There, judges use exactly the formula they use in traffic accidents -- with the result, as Leflar (2009: 445) put it, that once again the "predictability of damages aids pretrial settlement of cases."

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[29] I limit the regressions to wrongful-death cases yielding a plaintiff recovery, but not raising causation issues.

[30] Note also that in Table 3 Col. (4), I report the mean amounts paid in all law suits (published and unpublished), as reported in Maeda, et al. (2001). These numbers are consistent with the mean amounts reported in the published opinions.

3. Anticipated value lives. -- Because parties can use a decedent's earnings to predict the judgment, wrongful-death plaintiffs demand amounts that converge on the values judges eventually award (see Table 8 Panel C). For the most part, in wrongful death cases the judges value the decedents' lives at about 64 percent of what the plaintiffs initially demand. In five wrongful-death cases the judge awarded the plaintiffs exactly what they demanded, and in about 30 percent the judge gave the plaintiffs at least 80 percent. In only four cases did the judge value the decedent's life at less than a fifth of what the plaintiff demanded. Obviously, most plaintiffs are not "adding zeros" to their claims.

4. Universities and clinics. -- Damages are especially high in cases against large university and government hospitals. According to Panel A of Table 9, the university hospitals paid a mean 63.7 million yen (about $640,000) per case and the government hospitals paid 60.9 million. The private clinics paid only 34.7 million yen ($350,000). To hold the basic patient-level variables constant, in Table 9 Panel B I regress the amount awarded on, inter alia, the health-care institution involved. Because the omitted variable is **Clinic**, the coefficient on **University Hospital** indicates that courts award plaintiffs an additional 30 million yen in suits against an university hospital.

[Add Table 9 about here.]

The high awards against university hospitals probably reflect the mix of patients and medical procedures involved. Where the university hospitals specialize in complex procedures involving critically ill patients, clinics largely offer routine services for well patients. For the most part, the same degree of negligence will generate greater damages at the former than the latter.

Yet even among wrongful-death claims, the courts award higher damages against university and government hospitals. According to Table 9 Panel A, in wrongful-death cases these hospitals paid 59.7 and 49.0 million yen respectively. The clinics paid only 41.4 million yen.

The same phenomenon appears in the Panel B regressions. Suppose I regress **Award Value** on the institutional variables, but limit the cases to those involving wrongful-death claims. The coefficient on **University Hospital** falls in magnitude and significance, but remains at 12.7 million yen. Given that the wrongful-death award represents (both officially and actually) foregone future earnings, university hospitals apparently serve a wealthier clientele than the clinics. Better educated patients tend to be richer than average, and -- whether in the U.S. or Japan -- tend to know when and how to obtain sophisticated care.[31]

D. Why Do Patients Sue their Best Doctors?

1. Introduction. -- Why would Japanese patients disproportionately sue their best doctors rather than their worst? Why would they sue the specialists offering the most sophisticated care rather than the desultory clinic doctors peddling excessive antibiotics? Paradoxically, perhaps patients sue the best doctors (a) precisely because they offer the

[31] Given that most medical schools are located in urban areas, one might have thought the significant coefficient merely reflected the higher wages in the cities. According to unreported regressions, however, the result is robust to the inclusion of geographical dummies.

most sophisticated care (Section 2, below); (b) because courts hold them to higher standards (Section 3); and (c) because they work within teams where others observe their mistakes (Section 4).

2. They perform the most sophisticated work. -- (a) Introduction. University hospitals specialize in the difficult, aggressive treatment of high-risk patients. They take people no one else can cure, and attempt complex, risky measures to save them. Among the obstetricians, for instance, those on the university staff take the "high risk" pregnancies; those in the private clinics take the "well babies." Among patients generally, the university hospitals take those needing the most aggressive procedures; the private clinics take healthy patients who want basic reassurance.

As the mean 36-day hospital-stay figures for Japan suggest (6.5 days for the U.S.; Ramseyer, 2009: 312), moreover, many clinics (not university hospitals) function as long-term care facilities. They do not perform one difficult procedure after another. They do not rotate critically ill patients through their beds at American paces. They take old, mentally ill, and moderately sick patients and house them for weeks on end at government expense.

(b) More bad outcomes. That the university hospitals specialize in sophisticated care for the highest-risk patients generates two closely related consequences. First -- the degree of negligence held constant -- a higher fraction of cases at the university hospitals will result in "bad outcomes." Patients will not sue unless they experience an adverse event. Negligence or no, absent that adverse outcome they have no damages to collect. Even among entirely non-negligent doctors, in other words, the one who treats the higher risk patients will generate more bad outcomes than the one who caters to healthy patients. The point follows from the very definition of "high risk."

If patients could evaluate medical care accurately, they would not sue non-negligent doctors who cause bad outcomes. But most patients cannot evaluate care accurately. They lack both the information and the expertise necessary to distinguish negligently induced bad outcomes from simple bad luck. Lacking that information and expertise, they make both Type I and Type II errors: they forgive negligent doctors they should sue, and they sue non-negligent doctors they should thank. Even among the non-negligent doctors, therefore, patients will more often sue those offering sophisticated procedures to high-risk patients than those offering routine care to the fundamentally healthy.

(c) More negligence. Second, physicians performing more complex procedures will cause more genuinely negligent injuries. The point is one Mark Grady first articulated in 1988. Suppose a doctor lets his mind wander for 30 seconds. If a clinic internist does so while seeing a local patient, he may miss some symptoms. If he catches his slip, he will simply ask the questions again. If he misses his slip, he may misdiagnose the patient and prescribe the wrong antibiotic. But given that most people recover from most illnesses anyway, the patient will probably never notice.

Similarly, suppose a clinic surgeon lets his mind wander while setting a broken tibia. Usually, the bone will still heal. Sometimes, the surgeon may have to re-set it -- but most patients will never know why. And if the improperly set bone does cause some

residual pain, most patients will "live with it" rather than try to determine whether the doctor caused it negligently.

Suppose, however, that a thoracic surgeon lets his mind wander in the course of a CABG operation. Or suppose a neurosurgeon lets his mind wander while cauterizing a blood vessel in a patient's brain. Some patients will find themselves disabled for life. Others will die. In effect, the technological sophistication of the procedure will transform the same routine (and usually harmless) human fault (a wandering mind) into legal negligence, and massively inflate the costs to the patient.

3. Courts hold them to higher standards. -- Japanese courts hold sophisticated physicians and institutions to higher levels of care than the levels they impose on the clinic doctors. In a recent study of Japanese malpractice litigation, Feldman (2009: 263) writes that Japanese courts do not impose standards that vary by community: "The standard of care in Japanese malpractice cases is determined with reference to national rather than local practice."

Feldman is incorrect. Like American courts, Japanese courts do vary standards of care by geography. And not only do they vary them by geography, they vary them by the character of the institution. The higher the quality of the institution and the greater the expertise of the physician, the higher the level of care the court will demand. As the Supreme Court put it in 1995:[32]

> When a new method of treatment has been developed, should it (the tests, examination, treatment, etc.) be demanded of a medical institution? One cannot make the decision without considering the character of the medical institution, the medical environment of the area in which the institution is located, and so forth. It is not appropriate to ignore these factors and impose ... a uniform medical standard on all medical institutions.

Civil-law scholar and then-University-of-Tokyo professor Takashi Uchida (2007: 327) explains:

> In the [1995 Supreme Court] case, a hospital providing a high level of care was the defendant. Yet the diffusion of new treatment methods proceeds at different speeds depending on "the character of the medical institution [and] the medical environment of the area in which the institution is located." As a result, the presence of a violation of the duty of care should be determined by taking all of the factors into consideration.

4. Others see the mistakes they make. -- At university and big government hospitals, patients and their families are far more likely to learn of a doctor's mistake than at a clinic. University physicians work in teams. When one of the doctors botches an operation, several residents and nurses will witness the mistake. By contrast, clinic

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[32] Kono v. Nihon sekijuji sha, 1537 Hanrei jiho 3, 7 (Sup. Ct. June 9, 1995) (ital. added). That the standard of care varies by institutional character and geography is not peculiar to the 1995 case. Other opinions making the same point include: Kono v. Iryo hojin Ijinkai, 1734 Hanrei jiho 90, 100-01 (Nagoya D. Ct. Apr. 8, 1999) (finding liability); Yokozawa v. Japan, 1271 Hanrei jiho 3, 427 (Tokyo High Ct. Mar. 11, 1988) (finding liability); Ikemoto v. Kitakyushu, 1265 Hanrei jiho 75, 76 (S. Ct. Jan. 19, 1988) (Ito, J., concurring) (no liability); Hiranuma v. Tanaka, 1236 Hanrei jiho 105, 110 (Osaka D. Ct. June 12, 1986) (no liability).

doctors work alone -- or nearly so. When a doctor botches an operation, no one will know except the nurse. Holding her job at the doctor's pleasure, she will not likely tell the patient.

Indeed, should a clinic doctor want to "scrub" the patient's medical records after the fact, sometimes no one will prevent him (or her) from doing this either. One legal handbook for doctors makes the point explicit (Inoue, 2007: 88). Suppose, it suggests, that you are asked to disclose:

> a complete set of the original medical records such as the patient's medical chart. ... When you receive that disclosure request, you should first check the entire document. If you find a mistake, you should correct it. If you find matters only inadequately noted, you should add the necessary material.

Legal? In a handbook for potential plaintiffs, one lawyer understandably implies that it approaches fraud (Ueda, 2007: 117-25). He recognizes that it commonly happens, however, and details ways to detect it.

Reflecting a patient's inability to learn of physician error in a small clinic, the published-opinion database contains almost no successful claims against a clinic -- where the patient ended his medical care there. Instead, virtually the only claims against the clinics that appear are those where the patient began his (or her) care at the negligent clinic, but then moved to a second institution. More precisely, in 43 of the 51 cases where a plaintiff recovered damages from a clinic, the patient moved from the negligent clinic to a hospital that could then testify to what initially happened in the clinic.

The logic is simple. Suppose a clinic doctor botches an operation, and realizes he (or she) cannot handle the situation. Reluctantly but conscientiously, he (or she) calls an ambulance. The ambulance rushes the patient to the municipal hospital, where the more sophisticated specialists do their best to save him. If the patient dies anyway, his family may (no doubt sometimes the hospital staff hesitate to "rat" on the clinic doctors) hear all about the erring clinic doctor from the hospital staff.

By contrast, suppose the clinic doctor botches an operation but does not bother to call an ambulance. He (or she) knows he (or she) cannot handle the situation, but would prefer no one else learn of his (or her) mistake. Rather than rush the patient to the hospital, the doctor just lets the patient die. The patient's heirs will have fewer people to tell them what happened, and less access to any information they would need to file a suit.

In the Japanese court opinions, heirs sometimes sue the conscientious doctor who calls the ambulance. The doctor who lets the patient die, they virtually never do.

V. Overall Claiming Levels

A. Estimating from Insurance Premia:

Insurance premia offer one way to estimate the amounts claimants recover. Regulated to be sure, the Japanese casualty insurance market is competitive. And in competitive markets, insurers will set their premia at levels that let them recover their expected liabilities and administrative costs.

Doctors who operate private clinics can buy personal malpractice coverage through the JMA for 70,000 yen.[33] They can add institutional coverage through casualty

[33] About $700. See Leflar (2009a, 2009b). This contract pays up to 100 million yen, subject to a 1 million yen deductible.

insurance firms at rates estimated at 30,000 yen per bed (Leflar, 2009a: 8 n.28). And staff doctors can purchase coverage at rates advertised (in mid-2009) at 40,000 to 60,000 yen. Because Japanese hospital physicians work as employees rather than (as often in the U.S.) independent contractors, the hospital is liable for the doctor's torts under respondeat superior. As a result, the hospital's resources are crucial.

Compared to liability premia in the U.S., these rates are low. U.S. insurers charge prices that vary widely by specialty, but even in the cheapest fields exceed these numbers. In internal medicine, U.S. insurers charge $10,000-$20,000. In obstetrics and gynecology, they charge $50,000-$90,000. Across all fields, they charge a mean of about $18,400 (2000 data; Sloan & Chepke, 2008: 59, 60 fig. 3.1).

From these revenues, insurers will expect to cover their liabilities and operational costs. By one insurance text, Japanese casualty insurers distribute about 55 percent of their premium revenue to claimants (Takimoto, 1994: 171). According to its 2008 disclosure filings, Sonpo Japan (insurer to hospitals and physicians) distributes about 60 percent of its revenues (Sonpo, 2008).

If all doctors and hospitals bought insurance at these rates, malpractice revenues would total:

Clinic doctors, at 70,000 yen:	*4,958 million yen*
Staff doctors, at 50,000 yen:	*9,292 million*
Beds, at 30,000 yen:	*54,383 million .*
Total:	*68,633 million yen.*

If insurers paid the full amount to claimants, they thus would pay 69 billion yen (about $690 million). If they paid only 55 percent, they would pay 38 billion.[34] Recall that Mello & Studdert (2006) estimate the total U.S. (with 2.5 times the Japanese population) liability at $5.8 billion. Wheat (2005) estimates the U.K. (with about half the Japanese population) liability at $642 million. Apparently, Japanese claimants collect per capita about 16 to 29 percent as much as American claimants. Apparently, they collect about 27 to 50 percent as much as U.K. claimants.

Only apparently -- because this estimate is low. The calculation totals premium revenues -- based on the prices charged clinics. But as the discussion above shows, Japanese patients do not primarily sue the clinics. Disproportionately, they sue the large university and public hospitals. For the most part, these institutions simply self-insure. If university doctors were to buy third-party insurance, they would pay much higher prices than those the JMA charges their compatriots in the clinics.

For the same reason, the 30,000 yen per bed charge underestimates institutional liabilities. Clinics may pay 30,000 yen per bed, but patients do not sue them. They do sue the university hospitals, and insurers would never sell them coverage at 30,000 yen per bed. Rather than pay higher prices, the hospitals pay claims out of their operating budgets.

B. Estimating from Court Claims:

The published opinions offer an equally tentative way to estimate total claiming levels. First, during the seven years from 1998 to 2004, plaintiffs filed claims that

[34] Similarly aggregating physician and hospital premia, Kodama (2007: 74) estimates total malpractice payments in Japan at 50 billion yen.

yielded 229 published opinions (Table 1 Panel A). Among these plaintiffs, those in 182 cases (using Table 1 Panel B and Table 4) recovered 8.4 billion yen: a mean recovery of 36.5 million yen on all cases, and 46.0 million yen per victorious case.[35]

Second, during the same seven-year period, claimants litigated 2,298 (published and unpublished) malpractice cases to judgment. In these cases, 931 plaintiffs recovered some amount:

> *Litigated to judgment: 2,298 cases over 7 years (328/year), with plaintiffs recovering some amount in 931 cases (133/year).*

Additionally, claimants filed another 3,174 cases that did not proceed to judgment.

By combining these observations, I can estimate an upper-bound to the total recovery in litigated malpractice claims. Recall that the 182 successful published-opinion plaintiffs recovered 8.4 billion yen. If the remaining (931-182=) 749 successful litigating plaintiffs recovered the same average amount,[36] they would have collected (749 x 46.0 million yen =) 36.8 billion yen.

Turn then to the plaintiffs in the 3,174 cases from 1998 to 2004 that settled or were dropped. Suppose that these plaintiffs succeeded at the same rates as those who litigated to judgment (Table 1 Panel B).

> *Filed but settled: 3,174 cases over 7 years (453/year), with estimated recoveries in 1,286 cases (184/year).*

If the successful claimants collected the same average amounts as those in the published-opinion cases, they would have recovered an additional (1,286 x 46.0 million =) 59.2 billion yen. Alternatively, suppose (as seems more likely) that the settling claimants discounted their claims by the expected probability of success. If so, then more of them would have recovered something, but each would have received less. Given rational expectations, defendants would have paid the same aggregate amount.[37]

By coupling the insurance-based estimates in Subsection 1 with these court-claims-based estimates, I can also calculate the number of claimants who settled without first filing suit. Over seven years, defendants paid to the suing plaintiffs:

Actual amount to published-opinion plaintiffs:	*8.4 billion yen*
Estimated amount to unpublished opinion plaintiffs:	*36.8 billion yen*
Estimated amount to settling plaintiffs:	*59.2 billion yen*
Total:	*104.4 billion yen*

Per year, defendants paid (104.4/7 =) 14.9 billion yen. The subsection 1 insurance-based estimates suggest a one-year total payout of 37.7 to 68.6 billion yen. Less the 14.9 billion to the filing plaintiffs, the defendants must pay 22.8 to 53.7 billion yen per year to the non-filing claimants.

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[35] Maeda, et al. (2001: 58) and Hagihara, et al. (2003: 121) seem to report 22.0 million yen and 7.6 million yen, respectively, as the mean payouts for 1986-1998 -- despite purportedly using the same database.

[36] Table 1 Panel A indicates that these cases involved shorter times to judgment. In turn, this suggests that the plaintiffs in the unpublished cases probabled raised lower stakes and recovered lesser amounts.

[37] For example, suppose 100 claimants file suits for $5000, and each has a 20% chance of success. If all parties settle at the expected value of their claim, the defendants will pay $100,000: (.2 x 5000 =) $1000 to all 100 claimants. If instead all parties litigated to judgment, the defendant would still pay $100,000: $5000 to (100 x .2 =) 20 claimants.

Furthermore, suppose defendants paid the non-filing claimants average amounts equal to those they paid the published-opinion plaintiffs (36.5 million yen per plaintiff). Per year, they would have settled with (22,800/37.7 =) 625 to (53,700/37.7 =) 1,471 non-filing claimants. If they paid the non-filing claimants less (e.g., if, as seems reasonable, the non-filing patients asserted smaller claims), they would have paid more claimants.

Based on Table 1 figures for 2004, these calculations yield a total collecting (in- or out-of-court) claimant estimate of:

Litigating plaintiffs (405 x .395):	*160*
Filed but settling plaintiffs (1,004 - 405):	*599*
Non-filing claimants:	*1,471*
Total claimants:	*2,230*

Recall, however, that these estimates are low. The actually targeted doctors almost surely pay more than the premia charged the JMA clinic doctors.

As an alternative approach, I can discount the litigated cases by more general estimates of the number of out-of-court claims.[38] Nakajima (2001: 1635), for example, suggests that Japanese claimants litigate 8 percent of all malpractice claims; Sasao (2006: 1953) puts the figure at 10 percent. If plaintiffs annually file 1,110 claims in court, claimants may assert (in and out of court) as many as 1,110/.08 = 13,875 claims per year.

All told, the claim-based approach suggests a wide range: 1,004 litigated claims per year, but between 2,230 and 13,875 total claims per year. As two benchmarks, recall that Mello & Studdert (2006:13) estimate 50,000-60,000 claimants a year in the U.S. In Canada (with one-third the Japanese population), claimants file 1,083 suits (CHSRF, 2006).

VI. Why Are Claiming Levels so Low?

A. Unfounded Explanations:

1. Introduction. -- Apparently, claiming levels in Japan are not egregiously low -- but they are low nonetheless. To explain these claiming levels, observers to date have advanced several explanations. Consider each in turn.

2. Attorney-driven explanations. -- (a) Fee structure. Several observers (e.g., Feldman, 2009: 264; Yasunaga, 2008; Leflar, 2009; Maeda, et al., 2001) argue that the traditional Japanese fee schedule discourages malpractice claims. Under this schedule, clients initially pay their attorney a fraction of the amount they demand as a nonrefundable retainer. Should they successfully recover, they later pay him an additional fraction of the amount actually collected. Many malpractice victims, these scholars explain, simply lack the cash to advance their lawyer the initial payment.

As an explanation for the low claiming levels, however, this schedule-based argument does not work. Crucially, these observers do not argue that attorneys charge too much. Rather, they argue that attorneys structure their fee in the wrong format.

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[38] Leflar & Iwata (2005) and Ramseyer & Nakazato (1999) also extrapolate from the number of settlements negotiated through the prefectural medical associations. Unfortunately, this introduces the same bias as the premium-based estimates. The prefectural medical associations only handle the claims against association members -- overwhelmingly clinic doctors.

The explanation fails because the fee schedule has never been more than a suggestion,[39] and in some sectors (like the Tokyo international market) has been a routinely ignored suggestion. Had a different schedule with the same expected value maximized the joint welfare of an attorney and potential client, they could and would have freely chosen it. And if a client with a positive expected value claim needed a high-risk loan (the essence of a contingent fee) that the attorney could not make, he could have borrowed the money elsewhere and paid the attorney in cash.[40]

(b) Number of Attorneys. For clients, the problem in Japan has not involved (logically, could not have involved) the fee structure. Instead, it has involved the fee level. Put most directly, attorneys have simply charged more for their services than some malpractice claims warranted.

Evidence that fee levels have priced some malpractice claimants out of the market appears in Table 10. Attorney prices are a function (in part) of supply -- the number of attorneys per capita. In Column (1), I regress malpractice suits per prefecture on the standard independent variables and the number of attorneys in the prefecture. Because this number is endogenous to the level of litigation, I instrument it by the level of amenities available to professional families in the area. This is the approach used in Nakazato, Ramseyer & Rasmusen (2006) to instrument the number of attorneys in their study of prefecture-level attorney incomes. The calculated coefficient on the number of attorneys is positive and significant: the more attorneys per prefecture, the more malpractice suits.

The result is robust. Because half of Japanese attorneys work in Tokyo (Nakazato, Ramseyer & Rasmusen, 2006) and file the plurality of all malpractice suits, Tokyo could be driving the results. In Column (2) I drop Tokyo, and the results remain. In Column (3) I include the CABG variable, and in Column (4) I run the regression in OLS. In both cases, the coefficient on the number of attorneys remains positive and significant.

[Add Table 10 about here.]

This positive coefficient on the number of attorneys suggest that attorneys probably consider malpractice litigation undesirable work. Rational attorneys will take first the projects paying the highest returns, and move to lower-return projects only on a time-available basis. Infra-marginal, the highest return projects will be insensitive to the number of attorneys. The lowest return projects will not be, and according to Table 10 malpractice litigation is not. Instead, the more attorneys in the area, the more malpractice suits filed. Tentatively to be sure, the regressions suggest that attorneys take malpractice cases only when they lack enough other work.

Consistent with this observation, recall that plaintiffs disproportionately file malpractice suits in Tokyo and Osaka (Table 1 Panel C). Because these cities offer the greatest amenities for professional families, they attract the most attorneys. And because of the resulting competition, the attorneys in these prefectures (other than the few in the international law firms) earn lower incomes than they could earn elsewhere (Nakazato,

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[39] As some who posit this as an explanation acknowledge. See Feldman (2009: 264).

[40] Whether the parties actually ignored the suggested fee structure is not the issue; the crucial question is whether they could. If indeed they could ignore it but they did not, that fact simply suggests that the structure suited the mutual interests of the attorney and client.

Ramseyer & Rasmusen, 2006). Again, attorneys apparently turn to malpractice only when clients offer insufficient better-paying work.

3. Cultural explanations. -- In workshops on earlier versions of this paper, readers suggested that the Japanese patterns of malpractice litigation might reflect distinctive aspects of Japanese culture. Concerns over culture pervade comparative litigation research -- indeed, even domestically, De Ville (1998: 199) argues that:

> Potential litigants are constrained by more than just legal rules. Cultural and community attitudes, habits, and customs define socially acceptable ways to deal with grievances. ... [W]hen people live in tightly knit, kinship-based corporate communities, the social costs of disrupting the order are greater and litigation is relied upon less frequently ....

To test this and similar propositions, I offer several prefecture-level regressions (Table 11). To capture the possibility that litigation might be a "non-traditional" strategy shunned by older members of the community, in Column (1) I add the percentage of the population over age 64. The coefficient is insignificant. To capture the possibility that farm communities might be more "traditional, in Column (2) I add the percentage of the economic output that is agricultural. Again, the coefficient is insignificant.

[Insert Table 11 about here.]

De Ville (1998) suggests that litigation patterns will depend on whether the community is tightly knit. Column (3) suggests mixed results: the coefficient on the population itself is negative, but the coefficient on the population density is positive. The more people in a prefecture, the fewer suits filed, but the more people per square km, the more suits filed. To explore the possibility that wealthier communities might be less traditional, in Column (4) I add GDP per capita. The coefficient is insignificant. And in Column (5) I add all four "cultural" variables: other than on Density, the coefficients are again insignificant.

Perhaps the strongest evidence against the notion that cultural norms seriously constrain malpractice claiming, however, lies in the very litigation one observes: Japanese claimants most readily sue university physicians. Among all professionals in Japan, cultural norms assign no one greater respect than the university professor. Whether on prestige, honor, or moral authority, no physicians approach the respect that Japanese cultural norms grant university hospital physicians. If those norms protected anyone, they would protect the professor. Yet patients do not sue the more plebian, far-less-respected local clinic doctors. They sue their university professors.

Advocates of a cultural approach could change the hypothesis, of course. Perhaps cultural norms protect only local community members, not the distant and unapproachable professor. Yet to suggest the change is to highlight the essentially non-testable nature of this approach. Given the data, one can always tell a culture-based story that "explains" it. But as Talcott Parsons pointed out, the approach is as circular as they come (Geertz, 1973: 249-50): To explain the way people behave as a product of their culture, while defining culture as the way they have learned to behave does not, he is said to have told generations of students ... get us very far.

4. Court structure. -- (a) Delays. Scholars (Yasunaga, 2008; Feldman, 2009: 269; Maeda, et al., 2001) also attribute the scarcity of malpractice claims in Japan to the length

of the court proceedings.[41] Malpractice cases do take time. Where Japanese civil suits take a mean 8.4 months from filing to judgment (Inoue, 2006: 35), malpractice suits take 2.3 years. In Table 12 Panel A, I compare the published-opinion malpractice cases against a random sample of 120 published-opinion civil damage suits from 1995 to 2004, with equal numbers of cases per year. Where the random civil case takes 2.3 years, the malpractice suit takes 4.3 years. When I regress filing-to-judgment on the usual independent variables with the pooled malpractice-civil-damage dataset, the coefficient on the malpractice dummy is positive and statistically significant (Table 12 Panel B). Consistent with the two-year difference in means (Panel A), the coefficient on the malpractice dummy is about 2.

[Insert Table 12 about here.]

Malpractice claims take longer even with the amount at stake held constant. According to Panel A of Table 12, malpractice plaintiffs demanded an average 59 million yen. Plaintiffs in civil damage suits claimed only 31 million yen. And higher-stakes suits do take longer: the coefficient on **Demand Value** in the pooled dataset regression is positive and significant (Table 12 Panel B). **Demand Value** held constant, however, the coefficient on the malpractice dataset variable remains significant

The regressions in Table 12 demonstrate several other points. First, the fastest trials take place in Tokyo (Column (1)). Second, the Tokyo speed is not peculiar to malpractice. Tokyo courts handle <u>all</u> cases quickly (Column (2)). Third, trials did become faster after the introduction of specialist panels in 2001 (Column (3)). Last, although some of the increased speed may reflect faster adjudication generally, the bulk of the increased speed has occurred in the malpractice cases (Column (4)).

Even if court delays explain part of the reason Japanese less readily file claims over malpractice than traffic accidents (if indeed they do; I take no position on the question), they hardly explain why Japanese file fewer malpractice claims than Americans. According to the NPPB, <u>incident</u>-to-judgment times in the U.S. average 4.7 years. The Japanese courts disclose only <u>filing</u>-to-judgment times, but in Japanese malpractice cases these average 2.3 years.[42] In the published-opinion database, the difference between incident- and filing-to-judgment times averaged 1.6 years. If I add the 1.6-year difference to the mean filing-to-judgment times of 2.3 years, I still obtain average <u>incident</u>-to-judgment times in Japan of only 3.9 years. Malpractice litigation make take time in Japan, in short, but it is still faster than in the U.S..

(b) <u>Burden of proof.</u> Feldman (2009: 263-64) also blames the apparent reluctance of Japanese patients to sue on the way courts require them to bear the burden of proof: Japanese courts require them to "prove the central elements of their allegations." At a couple of levels, this fundamentally misleads. First, that the Japanese courts require plaintiffs to prove their case distinguishes malpractice claims neither from other Japanese

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[41] Leflar (2009b: 444-45) rightly notes that delays in Japan were substantial only <u>before</u> the recent reforms. In attributing the low claiming levels to delays, however, other observers draw on a tradition in American scholarship that blames low Japanese litigation rates in part on court delays (Haley, 1979). As the discussion here shows, Japanese courts are <u>not</u> particularly slow. <u>See also</u> Ramseyer & Nakazato (1999: 140-41).

[42] I exclude claims filed more than three years after the incident. These are primarily disability claims filed after the patient was certified by the government as disabled.

civil cases, nor from malpractice claims in the U.S. In most civil litigation in Japan, plaintiffs bear the burden of proof. In most civil litigation in the U.S. -- including medical malpractice litigation -- plaintiffs bear the burden of proof. That Japanese plaintiffs also bear the burden in malpractice cases explains nothing.

Second, just as American courts sometimes switch the burden of proof to defendants through doctrines like res ipsa locuter, so do Japanese courts. As one court explained:[43]

> The plaintiffs have neither asserted nor proven that the surgeon violated his duty of care. Yet the case involves the highly specialized field of medicine. ... In such cases, a plaintiff must show (i) that there was a mishap in his procedure, and (ii) that his symptoms thereafter worsened. Once he does so, a court may properly infer both negligence and the resulting injury.

In some ways, Japanese plaintiffs in malpractice cases bear a lower burden of proof than in other civil claims.

(c) Levels of damages. Some scholars further attribute the low malpractice claiming levels to the more "modest" (relative to the U.S.) damages awarded in Japanese courts.[44] According to the published-opinion database, however, Japanese courts award almost exactly the same average damages as American courts. As Leflar & Iwata (2005: 2000) observe, "mean and median awards in U.S. wrongful death cases ... seem not to diverge radically from the Japanese scale of damages." In wrongful-death claims, American courts award a decedent's heirs about $200,000-$300,000 (Section I.A., above). Japanese courts award about 50 million yen (Table 3) -- at 100 yen per $, about $500,000. Whatever the reason for the lower malpractice claiming levels in Japan, it is not "modest" damages.

B. Explanations from the Data:

1. Introduction. -- Patients file relatively few malpractice claims in Japan (not extremely few, but fewer than in the U.S. and some other wealthy democracies), and this study suggests a reason why. Granted, I do not explore the question directly. I do not collect data on all medical procedures. I do not measure the quality of those procedures, and then compare the percentage of problematic Japanese procedures with the percentage in other countries. I do not ask why patients filed claims after some problematic procedures but not others, and compare those reasons across different countries.[45]

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[43] Yamamoto v. Isami kotsu K.K., 485 Hanrei jiho 21, 25-26 (Tokyo D. Ct. June 7, 1967). In contesting this observation, Feldman (2009: 263) claims that the "Japanese academic commentary on the burden of proof in malpractice claims uniformly asserts" that "the burden of proof falls on plaintiffs." In fact, commentators routinely discuss the way Japanese courts shift burdens of proof to defendants in malpractice cases. Consider, for example, the standard civil law treatise by then-University-of-Tokyo Professor Takashi Uchida (2007: 328): in medical malractice cases, courts sometimes "lighten the burden of proof through a method known as the presumption of negligence." He then elaborates on the point for over four pages. For other discussions of the issue, see, e.g., Azami & Nakai (1994: 178-82), Kato (2005: 271-73), Nakamura (2001: 279-80).

[44] Feldman (2009: 266-67). In making this claim, Feldman again reflects one tradition in U.S. scholarship. See note [this note -3], supra. This tradition identifies low court awards as one reason for low litigation levels generally. E.g., Haley (1979).

[45] I also do not purport to explain the change over time shown in Table 1 Panel A.

Suggestively to be sure, however, the study does pose implications for the level of malpractice claims. Those implications tie malpractice claims to the level of medical technology, and medical technology levels to the universal insurance program. The study clarifies which procedures most often generate malpractice claims; other data identify the rates at which Japanese physicians perform those procedures; and the insurance price schedule identifies the economic reason why they perform them at the rates that they do.

2. Skewed pricing. -- Consider these implications more closely. The Japanese government suppresses the price physicians can charge for various procedures. Crucially, it does not suppress prices uniformly. Instead, it suppresses them by a schedule biased against the technologically most sophisticated modern procedures. For most work, it pays a lower price than doctors charge in (for example) the U.S. But for the most technologically demanding procedures, it pays an especially low price.

3. Rudimentary medicine. -- (a) Procedures. Faced with relatively lower prices for sophisticated care than for routine care, Japanese physicians focus on routine care. Compared to their peers in the U.S., they perform fewer of the complex procedures at the heart of modern medicine. They perform fewer, whether compared per capita or compared per disease-incidence.

If they wished, the large Japanese hospitals and university medical schools could perform the procedures. Technologically, they have (or could obtain) the modern equipment necessary. Professionally, they have (or could train) staff as sophisticated as those in any wealthy country. Yet compared to hospitals and physicians in the U.S., they do not perform the procedures. No matter how measured, they perform far fewer of the most complex and sophisticated procedures.

(b) Clinics. Faced with the insurance price schedule, nearly a third of Japanese physicians instead build (or inherit) and operate their own simple, private clinic. They do not (with some exceptions) buy expensive specialized medical equipment. They do not spend years in subspecialty residencies. In fact, they hardly specialize at all.

Yet of Japanese medical services, the clinic doctors supply a large fraction. They treat nearly any patient who walks in the door. Paid for out-patients by the visit, they require their patients to return time and again. Paid generously for in-patient care, they warehouse their patients for weeks on end at government expense.

4. Implications for claiming behavior. -- (a) Introduction. Just as the insurance pricing schedule affects the levels of medical technology, those technological levels in turn affect the rates at which patients file claims. As explained above, the schedule increases the amount of rudimentary care and decreases the amount of sophisticated care. The relative amounts of the two levels of care, however, necessarily also affect the number of claims patients can plausibly file.

For four reasons -- reasons elaborated above at Sec. IV.D. -- the structure of the insurance focuses medical care on those procedures least likely to generate malpractice claims. First, the structure lowers the number of procedures concerning which patients will learn about physician error (Subsection (b) below). Second, it increases the number of physicians held to a low legal standard of care (Subsection (c)). Third, it reduces the

number of procedures that generate a bad outcome patients can attribute to a doctor (Subsection (d)). And last, it reduces the frequency of legally cognizable negligence more generally (Subsection (e)).

(b) Clinic size. Dissatisfied patients will find that the very size of the clinics usually blocks them from suing the one-third of the doctors who run them. In a large hospital, physicians work in teams. They draw on the contributions of peers from a variety of specialties. They call on the help of several nurses. Should a doctor make a mistake, the other team members will know. Yet none of them works for any one of the physicians. Occasionally. one of them may tell the unfortunate patient (or his heirs) about the mishap.

By contrast, should a clinic doctor make a mistake, no one will know except the doctor himself and his nurse (who works directly for him). From time to time, a conscientious clinic doctor may admit his error to the patient unilaterally. A compassionate nurse may tell the patient or his heirs about the mistake. But the chance that either will occur is lower than in a large hospital where the entire team knows what happened and no one owes his or her job to the erring doctor.

(c) Standard of care. Patients will also find that Japanese courts hold clinic doctors to a lower legal duty of care. From the university physicians, courts expect specialized expertise, scientific currency, and the latest "best practices" from the New England Journal. Should such a doctor prescribe a drug no longer considered appropriate, a court may hold him and his hospital liable. Should he perform an operation with a technique once cutting-edge but now eclipsed, again it may hold them liable.

From the one-third of all Japanese physicians with a private clinic, however, the courts demand much less. These doctors do not purport to offer specialized or cutting-edge care. After all, many advertise services in both internal medicine and surgery. Effectively, they advertise themselves as able to do everything. And to any patient who knows even a bit of science, a doctor who claims to know enough about everything impliedly admits he knows very little about anything at all.

If these doctors do not purport to offer cutting-edge care, neither do the courts expect it of them. Instead, the courts hold them to a lower duty of care. Should a clinic physician attempt a procedure beyond his ability, a court will occasionally hold him liable for not referring the patient to a specialist. Often, however, it will just explain that -- wrong as the doctor was -- a patient cannot reasonably demand anything more of a clinic doctor.

(d) Fewer bad outcomes. As all doctors (whether clinic or no) shift to the relatively less sophisticated procedures, patients will experience fewer bad outcomes that they can blame on their doctor. They will not experience fewer bad outcomes. To the extent modern medical care improves patient welfare, they will experience more. They will, however, experience fewer they can blame on a doctor.

Suppose a patient has severe atherosclerosis. Suppose further that without a by-pass operation he will probably die. Although the operation increases the chance that he survives, it carries its own risks. It will not even necessarily save him. In the end, decades of fatty foods, indolence, and stressful work may kill the patient anyway.

Suppose the patient has no by-pass, and dies. Not having had the operation, his heirs cannot attribute the death to any doctor. But suppose instead he has the by-pass. He may live -- but only "may." He still may die, and if he does his heirs can now plausibly blame his doctor for the death. By-pass operations may save lives, in other words, but because of the risks they inherently present and the health of the patients who undergo them, they increase the number of adverse events patients can try to blame on their doctors.

Patients will only sue a doctor when they experience a bad outcome that they can attribute to a doctor or hospital. Through its pricing structure, the Japanese insurance discourages physicians and hospitals from offering intrusive procedures to seriously ill, high-risk patients. Necessarily, it reduces the number of adverse events for which patients can try to hold doctors and hospitals responsible.

(e) Less legal negligence. Relatedly, the level of technological sophistication in medicine also affects the incidence of legal negligence. To perform a technologically complex procedures, a physician will need to bring more knowledge and experience than he brings to a mundane procedure. He will need to monitor more indications of a patient's health. He will need to maintain higher levels of mental focus. Fail on any score, and he risks committing actionable negligence.

As Mark Grady (1988) explained two decades ago, technological complexity can transform routine, ordinary human foibles into legal negligence. In the mundane world of rudimentary medicine, a momentary lapse in attention will seldom create a serious risk of harm. Absent that risk of harm, the lapse will seldom constitute actionable negligence. In the midst of a technologically complex operation, however, the same lapse poses a serious high risk of harm -- and thus of legal negligence. In sophisticated more than rudimentary medicine, the routine mishap that plagues everyone can rise to the level of a legal breach.

C. Qualifications:

It is easy to overclaim. Insurance-driven technology-suppression may reduce the number of malpractice claims in Japan, but it hardly explains the entire contrast with the U.S. The frequency of doctor error in the U.S. (relative to the frequency in Japan), for example, obviously matters too. To be sure, I have no reason to think American doctors make more mistakes than Japanese doctors -- but I have no data on point. I have no reason to think American doctors more forthrightly disclose their mistakes -- but I have no data on that either.

Even more relevant, in several ways the U.S. judicial system encourages patients to file meritless but extortionate claims in the name of malpractice. By using civil juries, U.S. courts assigns questions of care, causation, and damages to complete novices. As conscientiously as they may try to do they job, most jurors know much less about these issues than a full-time judge.

Many U.S. courts also employ judges who are less professional than in Japan. Some state judges (as we all know too well) owe their campaign war-chest to the local bar. To the extent they do, U.S. courts assign legal questions to potentially badly biased personnel. What in Tokyo would be an often predictable inquiry before an even-handed

and experienced professional, becomes in the U.S. at best a simple lottery, and at worst a dishonest one.

Discovery -- similarly unavailable in Japan -- expands the scope for extortionate claims. Experience a bad outcome, and a patient can plague his doctor with massive and costly demands for evidence. Japanese patients have access to information too, but only under judicial scrutiny. Where American patients can demand information outside the view of the judge, Japanese patients can demand it only after they convince their judge they have a plausible claim.

To date, however, scholars of Japanese of malpractice litigation have focused on the perceived faults in the Japanese judicial system. In doing so, they focus on the wrong questions, for their inquiries have been almost entirely off-base. The attorney fee schedule in Japan, for instance, does not explain the level of claiming -- because the schedule does not bind. Court delays do not explain it either -- because Japanese courts are fast. Low damage awards do not explain it -- because Japanese courts are generous. Cultural peculiarities of Japanese society do not explain it -- because patients most often sue the very doctors they most respect. And burdens of proof do not explain it -- because Japanese courts impose the same burdens as American courts.

VI. Conclusions

Japanese patients seldom file malpractice claims. They do not claim as seldom as sometimes thought, but they claim less than patients in the U.S. and some other wealthy democracies. To date, most scholars have tried to explain the contrasts by identifying "faults" in the Japanese judicial system.

These scholars look in the wrong place. Much of the reason for the low claiming levels lies instead with the universal national health insurance program. Through the program, the Japanese government provides heavily subsidized medical care to all residents. To contain the enormous costs that such a demand subsidy would otherwise entail, it suppresses the prices it pays for most procedures. Crucially, it does not suppress prices uniformly. Instead, it suppresses most drastically the technologically most complex procedures.

These sophisticated procedures, however, are the very procedures most likely to generate malpractice claims. Physicians perform them in teams -- increasing the odds that patients (or their heirs) will learn of any mishaps. Japanese courts hold the doctors able to perform these procedures to higher standards of care -- making it easier for patients to meet their burdens of proof. The procedures are intrusive, succeed less often than ordinary medical care, and cater to higher-risk patients -- resulting in more adverse events. And the procedures demand greater attention and effort -- generating more cases of actionable negligence.

Part of the reason for the lower level of malpractice claims in Japan, in short, lies in the very level of medical technology. To restrain the cost of its universal insurance, the Japanese government has lowered the technological level of medical services its doctors provide. In the process, it has cut the number of procedures most likely to generate malpractice claims.

References

Aoki, Noriaki, Kenji Uda, Sachiko Ohta, Takahiro Kiuchi & Tsuguya Fukui. 2008. Impact of Miscommunication in Medical Dispute Cases in Japan. Int'l J. Quality in Health Care, 20: 358-62.

AON: Hospital Professional Liability and Physician Liability Benchmark Study Predicts Continued Loss Cost Increases in 2004. http://findarticles.com/p/articles/mi_m0EIN/is_2004_Jan_27/ai_112583139/.

Asahi shinbun shuppan. 2009. Shujutsu su de wakaru ii byoin 2009 [The Best Hospitals by Number of Operations, 2009]. Tokyo: Asahi shinbun shuppan.

Azami, Tatsuaki & Yoshio Nakai. 1994. Iryo kago ho [Medical Malpractice Law]. Tokyo: Seirin shoin.

Black, Bernard, Charles Silver, David A. Hyman & William M. Sage. 2005. Stability, Not Crisis: Medical Malpractice Claim Outcomes in Texas, 1988-2002. J. Empirical Legal Studies, 2: 207-59.

Canadian Health Services Research Foundation. 2006. Myth: Medical Malpractice Lawsuits Plague Canada. www.chsrf.co/mythbusters/html/myth21_e.php.

CHSRF. See Canadian Health.

De Ville, Kenneth. 1998. Medical malpractice in Twentieth Century United States, Int'l J. Technology Assessment in Health Care, 14: 197.

Ehara, Akira. 2005. Lawsuits Associated With Medical Malpractice in Japan: Rate of Lawsuits Was Very Low in Pediatrics, Although Many Children Visit Emergency Rooms. Pediatrics, 115: 1792-1793.

Foote, Daniel. 1995. Resolution of Traffic Accident Disputes and Judicial Activism in Japan. L. Japan, 25: 19.

Geertz, Clifford. 1973. The Interpretation of Cultures. New York: Basic Books.

Grady, Mark F. 1988. Why Are People Negligent? Technology, Nondurable Precautions, and the Medical Malpractice Explosion. Northwestern Univ. L. Rev. 82: 293.

Hagihara, Akihito, Minako Nishi, & Koichi Nobutomo. 2003. Standard of Care and Liability in Medical Malpractice Litigation in Japan. Health Policy, 65: 119-127.

Haley, John Owen. 1978. The Myth of the Reluctant Litigant. J. Japanese Stud., 4: 359.

Hamasaki, Tomoko, Tadamichi Takehara & Akihito Hagihara. 2008. Physicians' Communication Skills with Patients and Legal Liability in Decided Medical Malpractice Litigation Cases in Japan. BMC Family Practice, 9: 43.

Hiyama, Toru, Shinji Tanaka, Masaharu Yoshihara, Tatsuma Fukuhara, Shin'ichi Mukai & Kazuaki Chayama. 2006. Medical Malpractice Litigation Related to

Gastrointestinal Endoscopy in Japan: A Two-Decade Review of Civil Court Cases. World J. Gastroenterology, 12: 6857-6860.

Inoue, Kiyonari. 2007. Yokuwakaru iryo sosho [Easy to Understand Medical Litigation]. Tokyo: K.K. Mainichi komyunikeeshonzu.

Kamiya, Keiko, ed. 2007. Iryo jiko no sekinin [The Responsibility for Medical Accidents] (Tokyo: K.K. Mainichi komyunikeeshonzu).

Kato, Shintaro. 2005. Iryo kago sosho (I) [Medical Malpractice Litigation (I)]. In Kaoru Kamata, et al., eds. Minji ho III [Civil Law III]. Tokyo: Nihon hyoron sha, pp. 265-83.

Kinoshita, Katsuyuki. 2007. Professional Liability Insurance Program of the Japan Medical Association. Japan Medical Association J., 50: 390-396.

Kodama, Yasushi. 2007. Iryo anzen [Medical Safety]. Jurisuto, 1339: 67.

Kosei rodo sho. 2005. Iryo shisetsu chosa: ge [Survey of Medical Facilities: Part II]. Tokyo: Kosei tokei kyokai.

Kosei rodo sho. 2006. Kosei tokei yoran [Handbook of Health and Welfare Statistics]. Tokyo: Kosei tokei kyokai.

Kosei rodo sho. 2008. Chiiki hoken iryo kiso tokei, Heisei 19 nen [Basic Medical and Insurance Statistics by Region, 2007]. Tokyo: Kosei rodo sho.

Leflar, Robert B. 2009a. "Unnatural Deaths," Criminal Sanctions, and Medical Quality Improvement in Japan. Yale J. Health Policy L. & Ethics 1 (2009).

Leflar, Robert B. 2009b. The Regulation of Medical Malpractice in Japan. Chinical Orthopaedics & Related Research, 467: 443-449.

Leflar, Robert B & Futoshi Iwata. 2005. Medical Error as Reportable Event, as Tort, as Crime: A Transpacific Comparison. Widener L. Rev., 12: 189.

Maeda, Shoichi, Noriko Sakamoto, Koichi Nobutomo. 2001. The Problems of Medical Malpractice Litigation in Japan: The Significant Factors Responsible for the Tendency of Patients to Avoid Litigation. Legal Medicine, 3: 56-62.

Mello, Michelle M. & David M. Studdert. 2006. The Medical Malpractice System: Structure and Performance. In William M. Sage & Rogan Kersh, eds., Medical Malpractice and the U.S. Health Care System, pp. 11-29. New York: Cambridge University Press.

MHWL. See Kosei rodo sho.

Miyasaka, Yuhei. 2002. JMA Professional Medical Liability Insurance Program. Japan Medical Association J, 45: 407-15.

Nakajima, Kaue, Catherine Keyes, Tatsuo Kuroyanagi & Kozo Tatara. 2009. Medical Malpractice and Legal Resolution Systems in Japan. JAMA, 285: 1632.

Nakamura, Satoshi. 2001. Iryo sosho no jitsumuteki kadai [Practical Issues in Medical Litigation]. Tokyo: Hanrei taimuzu sha.

Nakazato, Minoru, J. Mark Ramseyer & Eric B. Rasmusen. 2006. The Industrial Organization of the Japanese Bar: Levels and Determinants of Attorney Incomes. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=951622.

Nihon bengoshi rengo kai. 2005. Bengoshi hakusho [Attorney White Paper]. Tokyo: Nihon bengoshi rengo kai.

OECD. 2006. Medical Malpractice: Prevention, Insurance and Coverage Options. Paris: OECD.

Priest, George & Benjamin Klein. 1984. The Selection of Disputes for Litigation. J. Legal Stud., 13: 1.

Ramseyer, J. Mark. 2009. Universal Health Insurance and the Effect of Cost Containment on Mortality Rates: Strokes and Heart Attacks in Japan. J. Empirical Legal Stud., 6: 309.

Ramseyer, J. Mark. 2010. The Effect of Cost Suppression under Universal Health Insurance on the Allocation of Talent and the Development of Expertise: Cosmetic Surgery in Japan. J. Law & Econ., __: __.

Ramseyer, J. Mark & Minoru Nakazato. 1989. The Rational Litigant: Settlement Amounts and Verdict Rates in Japan. J. Legal Stud., 18: 263.

Ramseyer, J. Mark & Minoru Nakazato. 1999. Japanese Law: An Economic Approach. Chicago: University of Chicago Press.

Reynolds, R.A., J.A. Rizzo & M.L. Gonzalez. 1987. The Cost of Medical Professional Liability. JAMA, 257: 2776-81.

Riles, Annelise & Takashi Uchida. Reforming Knowledge? A Socio-Legal Critique of the Legal Education Reforms in Japan. Drexel L. Rev., 1: 3.

Saiko saibansho jimusokyoku, ed. 2004. Shiho tokei nempo: Minji gyosei hen [Annual Report of Judicial Statistics: Civil and Administrative Cases]. Tokyo: Hoso kai. Available at www.courts.go.jp.

Sasao, Shogo. 2006. Medical Malpractice Litigation in Gastroenterological Practice in Japan: A 22-Yr Review of Civil Court Cases. Am. J. Gastroenterology, 101: 1951-53.

Sawa, Rintaro. 2008. A Healthcare Crisis in Japan: Criminalizing Medical Malpractice. Japan Medical Association J., 51: 235-41.

Shiho tokei. See Saiko saibansho.

Shimada, Yasuhiro & Yoshio Kato. 1994. Anesthesia Mortality and Morbidity in Japan: A Study of Lawsuit Cases. J. Anesthesia, 8: 1-5.

Sloan, Frank A. & Lindsey M. Chepke. 2008. Medical Malpractice. Cambridge: MIT Press.

Toba, Ken. 2005. Nihon jin no heikin chi [Japanese Averages]. Tokyo: Seikatsu joho sentaa.

Tokyo chiho saibansho iryo sosho taisaku iinkai. 2003. Tokyo chisai iryo shuchubu ni okeru iryo sosho no shinri no jitsujo ni tsuite [The Reality of the Investigations into Medical Malpractice Litigation in the Tokyo District Court Specialized Medical Section], 1105 Hanrei taimuzu 34.

Uchida, Takashi. 2007. Saiken kakuron [Personal Rights: Detailed Matters]. Tokyo: University of Tokyo Press (2d ed.).

Ueda, Kazutaka. 2007. Jitsumu Iryo kago sosho [Practical: Medical Malpractice Litigation]. Tokyo: Minji ho kenkyukai.

Vidmar, Neil, Paul Lee, Kara MacKillp, Kieran McCarthy & Gerald McGwin. 2005. Uncovering the "Invisible" Profile of Medical Malpractice Litigation: Insights from Florida. DePaul L. Rev. 54: 315.

Wheat, Kay. 2005. Is there Medical Malpractice Crisis in the UK? J. L. Med. & Ethics, Fall 2005, at 444.

Yamana, Manabu & Hiroshi Oshima. 2003. Saikin no iryo sosho no doko to shinri no jitsujo [The Reality of the Recent Direction in Investigations into Medical Malpractice Litigation]. Jiyu to seigi, Feb. 2003, at 14.

Yamashita, Noritaka. 2008. Ishi baisho sekinin hoken keiyaku ni okeru hoken jiken ni kansuru ichikosai [Some Thoughts on Insurance Cases under Insurance Contracts for Physician Liability. Songai hoken kenkyu, 69 (4): 1 (2008).

Yasunaga, Hideo. 2008. Legal Intervention Against Medical Accidents in Japan. Risk Management & Health Care Policy, 2008: 1, 39-42.

Yoshikawa, Kosaburo & Hiroshi Makabe . 2006. Iryo jiko sosho ni okeru wakai jirei no kenkyu [A Study of Settled Cases in Medical Malpractice Litigation]. Tokyo: Gendai jimbunsha.

Table 1: Selected Summary Statistics (I)

A. Numbers of Decisions

	All Cases			
	(1) Cases Filed	(2) Cases Closed	(3) Court Decisions	(4) Published Opinions
1995				42
1996				44
1997				33
1998	632	582	232	38
1999	678	569	230	23
2000	795	691	305	48
2001	824	722	334	44
2002	906	869	386	30
2003	1003	1035	406	30
2004	1110	1004	405	16

Notes: Columns (1) through (3) are from the administrative office of the courts (e.g., Inoue, 2007: 36); Column (4) is from the published opinion database, as described in the text.

B. Filing-to-Judgment Times and Recovery Rates

	(1) All Cases	(2) All Cases	(3) Published Opinions	(4) Published Opinions
	Filing to Judgment	Plaintiff Recovers	Filing to Judgment	Plaintiff Recovers
1995			5.00yr.	66.7%
1996			3.80	65.9
1997			4.37	60.6
1998	2.93 yr.	43.5%	4.86	71.1
1999	2.88	30.4	5.00	73.9
2000	2.97	46.9	4.24	72.9
2001	2.72	38.3	3.68	75.0
2002	2.58	38.6	3.55	86.7
2003	2.31	44.3	3.82	96.7
2004	2.28	39.5	3.55	93.8

Notes: Column (2) includes only cases proceeding to judgment (hanketsu); Column (1) includes cases that settle. Columns (1) and (2) are from the administrative office of the courts (e.g., Inoue, 2007: 36); Columns (3) and (4) are from the published opinion database, as described in the text.

C. Principal Litigation Venues

	(1) Pub'd Med Mal	(2) Ord. Civil Litigation	(3) All Med Mal.
Tokyo	30.5%	20.5	40.6%
Osaka	16.4	9.4	26.5
Nagoya	4.9	4.3	5.5
Yokohama	4.9	3.5	--
Fukuoka	4.3	9.5	8.1
Kobe	3.4	3.0	4.2
Other	35.6	49.7	20.1

Notes: Column (1) is from the published opinion database; Column (2) is from Shiho tokei (2004: tab. 5); Column (3), which includes settled cases, is from Maeda, et al. (2001: 57 tab. 1).

Table 2: Selected Summary Statistics (II)

A. Principal Malpractice Claims, by Procedure

	Pub op	All cases
Surgery-related	46.3 %	38.9
Obstetrics	15.5	13.7
Cancer	16.7	
Medication-related	15.2	
Misdiagnosis	12.4	
Cerebrovascular	10.3	
Emergency facilities	9.8	
Cardiovascular	7.5	

Notes: Published opinion dataset, as described in text -- n = 348. Categories are not mutually exclusive. All case data from www.courts.go.jp/saikosai/about/iinkai/izikankei/toukei_01.html (through _04.html).

B. Malpractice Claims and Beds, by Institution

	Malpractice Claims	Beds
Government hospital	20.7%	21.4%
University hospital	17.5	5.7%
Other public hospital	17.1	17.8%
Private hospital	22.7)	55.2%
Private clinic	18.7)	
Dental clinic	1.5	

Notes: Claims data from published opinion dataset, as described in text -- n = 343. Beds data from (Kosei, 2005: tab. 11).

C. Malpractice Claims, by Patient Age

Age	% Civil Cases
0 - 2	16.1%
3 -10	4.0
11-20	6.6
21-30	12.6
31-40	7.8
41-50	10.6
51-60	16.1
61-70	10.9
71-	15.2

Notes: Published opinion dataset, as described in text, n = 348.

Table 3: Selected Summary Statistics (III)

	n	Min	Mean	Median	Max
A. Case Level:					
1. Financial.					
Award Value (/1000)	346	0	31,100	14,500	205,000
Demand Value (/1000)	338	589	74,400	59,400	546,000
2. Delays.					
File-to-Judgment	265	0	4.20	4	11
Accident-to-Judgment	265	1	5.82	5	14
3. Recovery.					
Plaintiff Recovers	348	0	.744	1	1
No Causation	343	0	.201	0	1
4. Patient.					
Male	341	0	.543	1	1
Death	348	0	.592	1	1
Age	316	0	36.3	38.5	88
5. Accident.					
Misdiagnosis	348	0	.124	0	1
Medication Error	348	0	.152	0	1
Surgery	348	0	.463	0	1
Obstetrics					
Emergency Room	348	0	.098	0	1
Cardiac Care	348	0	.075	0	1
Cerebrovascular	348	0	.103	0	1
Cancer	348	0	.167	0	1
6. Institution.					
University Hospital	343	0	.175	0	1
Government Hospital	343	0	.207	0	1
Red Cross Hospital	343	0	.047	0	1
Other Public Hospital	343	0	.125	0	1
Private Hospital	343	0	.227	0	1
Dental Clinic	343	0	.015	0	1
Clinic	343	0	.187	0	1
B. Prefecture Level:					
1. Explanatory variables.					
Suits	46	0	7.57	2.5	106
Population (/1000)	46	607	2,748	1,798	12,600
% Population over 64	46	16.4	22.5	21.9	27.1
% Agricultural Econ	46	.3	25.3	27.7	89.2
Density	46	67.4	649	268	5751
GDP PC (/million)	46	2.7	3.5	3.6	6.5
Hospital Beds	46	9,396	34,933	24,367	129,939
Clinic Beds	46	622	3,436	2,898	10,990
Medical School	46	1	1.72	1	13
Cardiac Bypass	46	0	3.74	2	20
Attorneys	46	28	456	91.5	10,263
2. Instruments.					
Museums	46	3.3	11.2	9.85	32.9
Concerts	46	9.85	12.7	12.4	15.6
School Internet	46	37	70.4	71.6	92.1
College Grads	46	7.2	12.3	11.4	24.2

Notes: Published opinion database, as described in text.

Table 4: Amounts Recovered

	(1) Total Payout	(2) Percent Death	(3) Mean Payout	(4) Mean Payout	(5) Mean Payout
			Pub.	Death (Pub.)	All
1995	979*	69.0%	23.3*	38.9*	24.0
1996	834	68.2	19.4	51.4	15.3
1997	564	72.7	17.1	36.5	15.4
1998	1,041	57.9	27.4	55.8	40.1
1999	957	69.6	41.6	61.9	
2000	1,181	47.9	25.3	53.6	
2001	1,408	52.3	32.0	63.0	
2002	1,338	50.0	44.6	38.3	
2003	1,485	46.7	49.5	49.7	
2004	954	62.5	59.6	74.7	
1995-2004	10,761	59.5	31.1	50.0	

Notes: * Payout numbers are in million yen. Column (3) includes cases in which plaintiff did not recover. Column (4) is limited to wrongful death cases in which the plaintiff recovers at least some amount, and where the court does not reduce recovery for contributory negligence or causation issues.

Columns (1)-(4) are from the published opinion dataset, as described in the text. Column (5) is from Maeda, et al. (2001), and gives the mean pay out in all cases filed in court, including those that settle.

Table 5: Geographical Differences

Dependent variable	(1) *Plaintiff Recovers*	(2) *Award Value*	(3) *File-to-Judgment* .
Tokyo	.025 (0.13)	-5.95 (0.94)	-.811 (2.56)**
Osaka	.479 (1.86)*	-9.55 (1.35)	-.110 (0.31)
Nagoya	.208 (0.54)	-12.1 (1.10)	1.340 (2.54)**
Yokohama	-.078 (0.20)	3.96 (0.31)	-.650 (1.18)
Kobe	.288 (0.62)	-.24 (0.02)	-.060 (0.09)
Fukuoka	Dropped	-3.59 (0.33)	-.267 (0.42)
Shizuoka	-.736 (1.49)	-5.98 (0.26)	2.281 (2.35)**
Male	.089 (0.53)	14.6 (2.91)***	.179 (0.70)
Age	.021 (1.84)*	.15 (0.41)	-.013 (0.76)
Age Sq	-.003 (1.97)*	-.007 (1.45)	-.000 (0.04)
Death	-.167 (0.96)	-6.09 (1.20)	.432 (1.62)
No Causation		-30.1 (5.25)***	.574 (1.81)
Pltf Recovers			-.049 (0.16)
Demand Value			5.58@ (2.42)**
n	299	241	239
Adj/pseudo R2	.04	.18	.12
Regression	Probit	OLS	OLS

Notes: ***, **, * - significant at 1 %, 5 %, and 10 % levels. @ is x 109. Coefficients in Column (2) are divided by 106, and dataset in is limited to Pltf Recovers ==1. Published opinion dataset, as described in text.

Table 6:
Settlement and Litigation, by Award/Demand

Award/Demand	Settled n (%)	Litigated n (%) .
less than 20 %	11 (24.4%)	57 (21.7%)
20 ≤ x < 30 %	4 (8.9)	21 (8.0)
30 ≤ x < 40 %	9 (20)	25 (9.5)
40 ≤ x < 50 %	5 (11.1) 25 (9.5)	
50 % and over	16 (35.6)	135 (51.3)
Total	45	263
Over 20 million award:	12 (26.7%)	153 (58.2%)

Note: The table gives the number (and percentage) of cases that fell in a given range of the amount of the award divided by the amount demanded by the plaintiff (source). The settled cases are all Tokyo District Court cases settled between April 2001 and September 2002, as investigated by the committee of the Tokyo District Court. The litigated cases are those in the published-opinion database (as described in the text) that resulted in some recovery to the plaintiff.

Table 7:
Determinants of Malpractice Litigation

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: Suits						
Population	22.2	-3.68	-4.37	-5.59	-49.7***	-24.6*
	(1.14)	(0.36)	(0.41)	(0.57)	(3.12)	(1.96)
Hospital beds	.0004*	.0004***	.0002	.0003**	-.0001	.0002*
	(1.87)	(3.89)	(1.46)	(2.67)	(0.40)	(2.00)
Clinic beds	-.0020*	-.0018***	-.0014**	-.0016***	-.0013*	-.0016***
	(1.88)	(3.31)	(2.46)	(3.08)	(1.81)	(3.05)
Medical school			7.585***	3.671**		
			(10.29)	(2.56)		
Cardiac bypass					.0250***	.0095**
					(7.52)	(2.64)
n:	46	45	46	45	46	45
Adj. R2	.66	.67	.90	.71	.86	.71
Regression:	OLS	OLS	OLS	OLS	OLS	OLS
Prefectures:	All	Ex Tokyo	All	Ex Tokyo	All	Ex Tokyo

Notes: ***, **, *: statistically significant at the 1, 5, and 10 % levels.
Coefficients, followed by the absolute value of the t-statistic on the line below. Population coefficients are x 107. All regressions include a constant term. All prefectures except Okinawa.

Table 8: Valuation of Human Life

A. High Awards:

Date	*Court*	*Award*	*Sex*	*Age*	*Death*	*Diability*
Mar. 13, 2002	Tokyo	205 million	Male	50	No	Yes
Feb. 16, 2004	Chiba	189 million	Male	14	Yes	No
May 26, 2003	Tokyo	169 million	Female	20	No	Yes
Apr. 24, 1998	Osaka	153 million	Male	63	Yes	No
Nov. 21, 2002	Tokyo	153 million	Male	30	No	Yes
Jan. 21, 2004	Osaka	150 million	Male	32	No	Yes
July 29, 1999	Fukuoka	145 million	Female	0	No	Yes
Apr. 19 2001	Tokyo	141 million	Male	4	No	Yes
July 8, 1996	Kobe	138 million	Male	62	Yes	No
Mar. 31, 2003	Yamaguchi	137 million	Male	29	No	Yes

B. Human Life Valuation:

	(1)	(2)	(3)	(4)
		Estimated using		.
Age	Traffic Accid. Formula		Observed Court Formula	
	Men	Women	Men	Women
20	72,007	52,649	50,505	47,448
30	72,537	45,887	64,768	51,650
40	68,917	39,799	71,820	47,073
50	61,148	34,388	65,252	42,223
60	49,230	29,651	44,647	35,689

Notes: In 1000 yen.

The "Traffic Accident Formula" is the value of human life calculated using the standard formula, with 25 million yen for pain and suffering, 1.5 million for funeral expenses, a living expense offset of 50 percent, the sex-specific average Japanese annual earnings given at www.english-resume.net/indiv/ent41-02.php, and standard Japanese Leibnitz discounting tables. The "Observed Court Formula" is the predicted amount using the coefficients calculated through an OLS regression of court awards on Age, Age Squared, and a constant, as discussed in the text.

C. Court-Award/Plaintiff-Demand

Award Demand	Fraction of All Cases
0-20%	4.6%
21-40	14.8
41-60	25.0
61-80	26.9
81-100	28.7

Mean Award/Demand = 63.5%

Notes: Civil cases only; wrongful death cases only. Excludes those in which the plaintiff did not recover, or where court found comparative negligence or intervening causes. n = 108

Table 9: Institutional Differences

A. Damage Awards:

	Mean Award	*n*
1. All Cases:		
University hospital	63.7 million yen	33
Government hospital	60.9	33
Red Cross hospital	46.3	7
Other public hospital	50.7	17
Private hospital	50.1	52
Dental office	1.3	4
Clinic	34.7	38
2. Death Cases Only:		
University hospital	59.7 million yen	19
Government hospital	49.0	16
Red Cross hospital	58.0	4
Other public hospital	47.7	13
Private hospital	52.5	36
Dental office		0
Clinic	41.4	15

Notes: Table includes only those cases where plaintiff receives some amount, and where court does not dock amount for either comparative negligence or causation.

B. Regressions

	(1)	(2)	(3)	(4)
Dependent Variable:	Plaintiff Recovers	Award Value	Award Value	File-to-Judgment
University Hosp	-.328 (1.24)	30.4 (3.94)***	12.7 (1.47)	.430 (1.03)
Government Hosp	-.240 (0.92)	19.7 (2.65)***	5.11 (0.61)	.883 (2.14)**
Red Cross Hosp	-.291 (0.71)	3.25 (0.25)	4.79 (0.32)	-.266 (0.37)
Other Public Hosp	-.260 (0.90)	15.2 (1.73)*	3.62 (0.41)	.077 (0.17)
Private Hosp	.085 (0.32)	1.38 (1.95)*	4.69 (0.60)	.170 (0.43)
Dental Office	-1.110 (1.20)	-42.3 (1.15)	Dropped	-2.48 (1.26)
Male	.070 (0.42)	12.4 (2.52)**	14.7 (2.81)***	.236 (0.90)
Age	.024 (2.21)**	.066 (0.19)	.849 (2.31)**	-.012 (0.65)
Age Sq	-.0003 (2.30)**	-.007 (1.56)	-.014 (2.84)***	-.0000 (0.18)
Death	-.192 (1.12)	-7.02 (1.43)		.309 (1.13)
No Causation		-29.3 (5.38)***	-32.2 (5.61)***	.450 (1.39)
Pltf Recovers				-.018 (0.06)
Demand Value				4.64@ (1.88)**
n	310	239	142	237
Adj/pseudo R2	.04	.24	.27	.007
Regression	Probit	OLS	OLS	OLS
Cases		All Awards	Death Awards	

Notes: ***, **, * - significant at 1 %, 5 %, and 10 % levels. Column (1) are divided by 106, and dataset in (2) and (3) is limited to Pltf Recovers ==1. Column (2) includes all awards; Column (3) includes only wrongful-death cases. Published opinion dataset, as described in text. @ is x 109.

Table 10: Malpractice Suits and Attorneys

	(1)	(2)	(3)	(4)
Dependent variable: Suits				
Population	-.000 (0.23)	.000 (0.49)	-.000 (1.74)*	.000 (1.75)*
Hospital Beds	.0002 (3.15)***	-.000 (0.59)	.0002 (3.09)***	.0002 (3.12)***
Clinic Beds	-.001 (2.56)**	.000 (0.57)	-.001 (2.89)***	-.001 (3.15)***
Cardiac By-pass			1.018 (2.06)**	.946 (2.84)***
Attorneys	.008 (5.01)***	.022 (4.55)***	.008 (5.22)***	.008 (17.44)***
n	46	45	46	46
Adj R2	.96	.94	.97	.97
Regression	2SLS	2SLS	2SLS	OLS
Prefectures	All	Ex Tokyo	All	All

Notes: ***, **, *: statistically significant at the 1, 5, and 10 % levels.

Coefficients, followed by the absolute value of the t-statistic on the line below. Population coefficients are x 107. All regressions include a constant term. All prefectures except Okinawa, excluded because of its idiosyncratic legal market.

Attorneys are instrumented with variables indicating the amenities available to professional families in the prefecture: Museums, Concerts, School Internet, and College Grads.

Table 11 -- "Cultural" Factors

A. Tokyo Included:

Dependent variable:	(1) *Suits*	(2)	(3)	(4)	(5)
Population	-.000 (1.23)	-.000001(1.77)*	-.000002(3.26)***	-.000001(1.76)*	-.000002(2.93)***
Hospital Beds	.0002 (3.01)***	.0002 (2.95)***	.0002 (3.78)***	.0002 (3.00)***	.0002 (3.80)***
Clinic Beds	-.001 (2.67)**	-.001 (2.23)**	-.001 (2.05)***	-.001 (2.99)***	-.0003(1.05)
Cardiac By-pass	.946 (1.80)*	1.077 (2.12)**	.793 (2.14)**	.939 (2.52)**	.351 (1.06)
Attorneys	.008 (4.35)***	.007 (4.97)***	.005 (2.88)***	.009 (6.40)***	.006 (4.72)***
% Over 64	-.030 (0.06)				.129 (048)
% Agricul Eco		-.029 (0.87)			-.015 (0.51)
Density			.006 (2.64)**		.006 (4.12)***
GDP PC				-1067 (0.48)	2607 (1.34)
n	46	46	46	46	46
Adj R2	.97	.97	.97	.97	.98

Notes: ***, **, *: statistically significant at the 1, 5, and 10 % levels. Coefficients, followed by the absolute value of the t-statistic on the line below. All regressions include a constant term. All prefectures except Okinawa, excluded because of its idiosyncratic legal market.

Attorneys are instrumented with variables indicating the amenities available to professional families in the prefecture: Museums, Concerts, School Internet, and College Grads.

Table 12: Court Delays

A. Summary Statistics:

Dataset	*n*	*Min*	*Median*	*Mean*	*Max*
1. *Filing to Judgment (years):*					
Malpractice cases	343	0	4	4.29	11
Random civil cases	120	0	2	2.34	11
2. *Amount Demanded (million yen):*					
Malpractice cases	338	.589	59.4	74.4	546
Random civil cases	120	.388	31.4	71.3	674

B. Regressions:

	(1)	(2)	(3)	(4)
Dependent Variable: File-to-Judgment				
Med Mal	1.970 (9.46)***	1.891 (4.80)***	1.866 (8.98)***	2.167 (8.21)***
Demand Value:#	5.72 (5.14)***	5.50 (4.90)***	6.23 (5.52)***	6.29 (5.59)***
Tokyo	-.867 (3.77)***	-.681 (1.45)		
Osaka	-.363 (1.34)	-.512 (0.96)		
Nagoya	.568 (1.36)	-.738 (0.97)		
Yokohama	-.649 (1.35)	-.227 (0.12)		
Kobe	.925 (2.19)**	.694 (1.12)		
Fukuoka	-.274 (0.60)	-.165 (0.18)		
Shizuoka	1.661 (2.65)***	2.948 (1.51)		
MM * Tokyo		-.267 (0.50)		
MM * Osaka		.194 (0.31)		
MM * Nagoya		1.903 (2.09)**		
MM * Yokohama		-.435 (0.22)		
MM * Kobe		.455 (0.52)		
MM * Fukuoka		-.145 (0.14)		
MM * Shizuoka		-1.422 (0.69)		
Post 2001			-.813 (4.25)***	-.246 (0.68)
MM * Post 01				-.784 (1.84)*
n	456	456	456	456
Adj R2	.25	.25	.22	.23

Notes: ***, **, *: statistically significant at the 1, 5, and 10 % levels.

Coefficients, followed by the absolute value of the t-statistic on the line below. All regressions include a constant term. #: x 109 "MM *" designates the interaction of the variable with a dummy variable equal to 1 if the case is from the medical malpractice dataset.