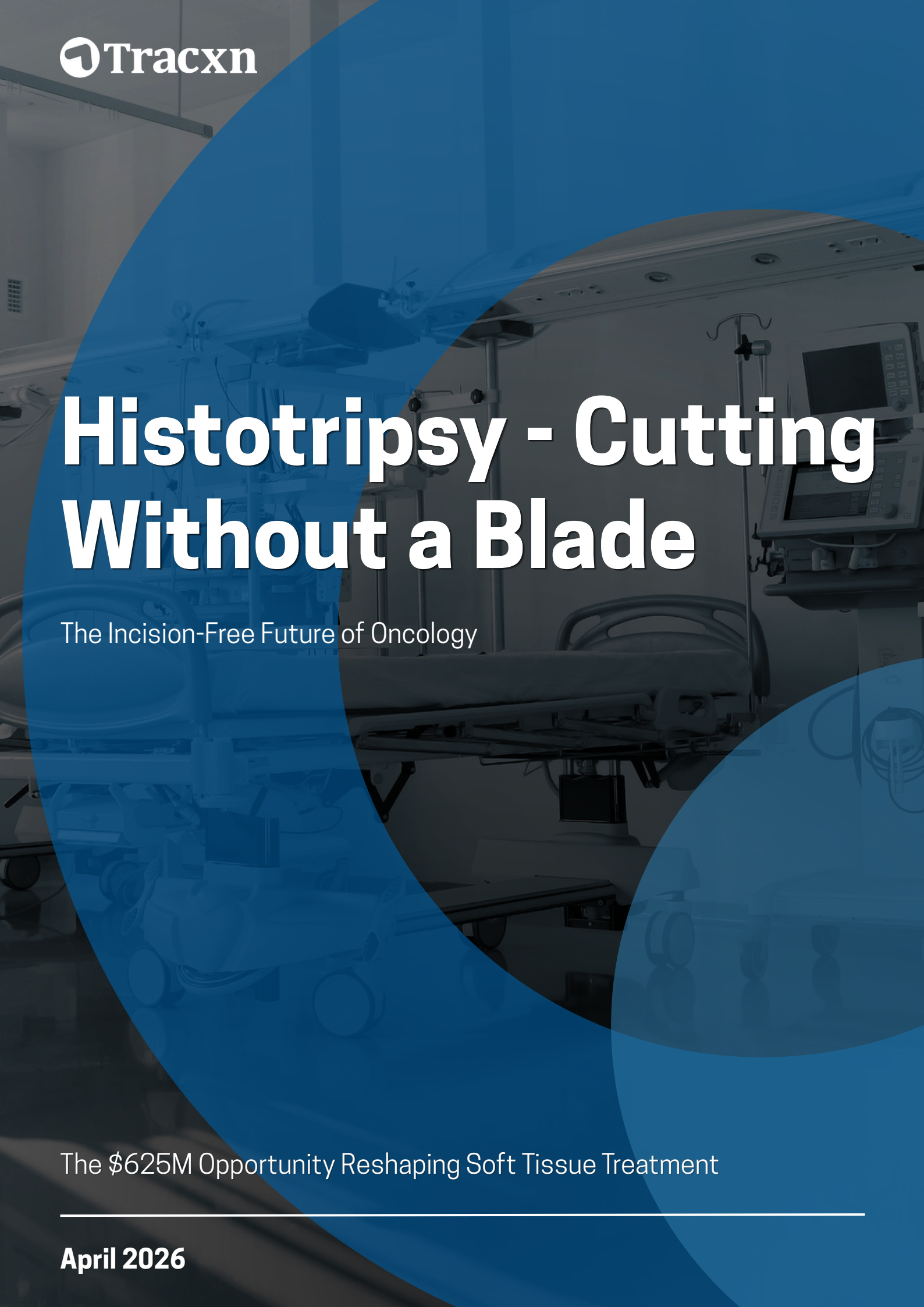
Tracxn

Histotripsy - Cutting Without a Blade

The Incision-Free Future of Oncology



The $625M Opportunity Reshaping Soft Tissue Treatment

April 2026

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Executive Summary

GLOBAL HISTOTRIPSY: NEW FDA CATEGORY WITH 5 BUILDERS

The histotripsy ecosystem is one of the most concentrated in medtech, 5 tracxn-tagged companies globally, all founded after 2009, all responding to a single regulatory proof point. The FDA granted the first De Novo clearance for histotripsy in October 2023, creating a new device category with no prior predicate. ~22 months later, one company has exited at ~$2.3B. The remaining four are still pre-exit and pre-strategic premium.

5
Companies globally

4
Institutionally-Funded

> The FDA opened the category in October 2023. There are 5 companies building in it. The current window for early-stage entry remains open but may narrow as additional clinical and reimbursement milestones are achieved.

EXIT ACTIVITY: ONE EXIT, ONE CATEGORY-DEFINING PRICE

~$2.3B EXIT

HistoSonics acquired - Aug 2025 by K5 Global, Bezos Expeditions & Wellington Management.

No IPOs have been recorded in the 5-company universe. The HistoSonics exit was led by technology growth investors, not traditional medtech strategics, setting a platform-scale valuation benchmark rather than a device-scale one. Strategic acquirers (Medtronic, J&J, Boston Scientific) have not yet moved. The challenger companies remain available at pre-strategic valuations

CAPITAL: CONCENTRATED AND ACCELERATING

$625M

All-time equity funding across 14 rounds

Funding peaked at $285M in 2025, driven by HistoSonics' $250M, Series E led by Founders Fund, Peter Thiel's venture capital firm. 90% of total capital is concentrated in one company. The challenger cohort (SONIRE, Sound Blade, Petal) has collectively raised ~$59M across 4 rounds, still priced well below any plausible strategic acquisition threshold, though with materially higher regulatory and clinical risk than the exited leader carried at the time of its exit.

1
FDA-cleared device globally

3
Funded Countries (US, Canada, Japan)

FUNDING STRUCTURE: TWO-SPEED, NO SEED

The funding distribution reveals a structurally unusual pattern for an early-stage category. There are no seed-stage rounds, every company that attracted institutional capital entered at Series A or above, a signature of deep-science categories where capital requirements at inception exceed what seed funds will deploy.

$532M
Late-stage funding (5 rounds)

~$90M
Early-stage funding (9 rounds)

> **KEY SIGNAL**
> Late-stage capital is already here, ~22 months post-clearance. The early-stage funding is now accelerating. The two-speed compression is where the return multiple lives.

SNAPSHOT

$285M
Peak annual funding (2025)

90%
Of all-time funding from HistoSonics alone

Oct 2023
FDA De Novo clearance, category creation date

1. Technology Primer

> Histotripsy does not cut, burn, freeze, or irradiate. It uses focused sound waves to mechanically liquefy tissue, and this single physical distinction cascades into every commercial advantage the technology holds.

How it works, and why the mechanism is the moat

Histotripsy is a non-invasive, ultrasound-based ablative therapy that destroys tissue through focused acoustic cavitation. A transducer placed against the patient's skin fires high-intensity ultrasound pulses into a precisely defined internal target. Using a very low duty cycle to prevent heating, the pulses generate a dense cloud of cavitation microbubbles that expand and collapse within microseconds, the resulting mechanical shear breaks down cells. The acellular debris is absorbed by the body over approximately four weeks. No heat, no incision, no radiation. Real-time ultrasound makes the bubble cloud visible as it works; physicians adjust the treatment live.

The mechanism is not just a technical detail, it is the origin of three structural advantages that thermal competitors cannot replicate by iteration: it generates no heat (eliminating heat-sink vulnerability), it requires no probes or incisions (enabling same-day discharge), and it preserves cell membrane antigens intact rather than denaturing them. That third property is the least understood but potentially the most consequential: preclinical evidence suggests histotripsy releases tumor antigens with retained immunogenicity, promotes abscopal responses at untreated sites, and potentiates checkpoint inhibition with anti-tumor immune responses stronger than thermal ablation or radiation*(Immune activation benefits have not yet been demonstrated in human clinical trials)*. A therapy that shrinks the treated tumor *and* primes the immune system to attack the rest is not a device story, it is a combination therapy platform.

Why the differentiators expand the market, not just market share

The standard comparison of histotripsy against HIFU, RFA, and surgery focuses on attributes. The more important insight is what those attributes unlock at a population level.

Table 1

Treatment Modality Comparison: Histotripsy vs HIFU, RFA, and Surgery

Feature	Histotripsy	HIFU	RFA / Cryo	Surgery
Mechanism	Mechanical cavitation	Thermal necrosis	Thermal / freeze	Resection
Heat-sink risk	None- immune to blood flow	High- disrupts ablation	High	N/A
Invasiveness	Zero- external only	Zero- external	Percutaneous probes	High
Recovery	Same-day discharge	1–2 days	1–2 days	Days to weeks
Immune activation	Yes- antigen-preserving *(Observed in preclinical models only. No human clinical evidence as of March 2026)*	Minimal	Limited	Limited

The heat-sink effect, where blood flow near a tumor disperses thermal energy and makes ablation unreliable, disqualifies HIFU and RFA for a large share of liver, pancreatic, and renal tumors adjacent to major vessels. These patients are currently classified as “unresectable” and offered systemic chemotherapy or palliative care. Histotripsy does not face this constraint.

Clinical applications - a beachhead strategy, not a single-indication bet

FDA clearance for liver tumors is the entry point, not the ceiling. Each new indication requires a separate FDA clearance, meaning every approval deepens the regulatory moat and resets the competitive clock for challengers.

- **Oncology (commercial stage):** Liver tumors, FDA cleared October 2023. Active trials in pancreas, kidney, breast, and bone sarcoma underway.
- **Urology (next wave):** BPH and prostate cancer. Phase I complete; pivotal CAIN trial for BPH ongoing. Large, procedure-volume-driven market.
- **Cardiology (high-value optionality):** Calcific aortic stenosis and thrombus dissolution. Thermal ablation and surgical intervention carry significant risk near the aortic valve and major vessels; histotripsy's non-thermal, non-invasive mechanism may allow precise tissue disruption in anatomical contexts where heat-based modalities are contraindicated. Evidence base is nascent, no clinical trials initiated and should be treated as long-duration optionality rather than a near-term indication.
- Neurology (long-duration optionality): Essential tremor, Parkinson’s, intracerebral hemorrhage. Skull propagation challenges being addressed; nascent but high-ceiling

Regulatory milestones - compounding, not linear

The regulatory history of histotripsy is short but structurally significant. The October 2023 FDA clearance was not just a timing milestone, it was category creation.

- **Academic origin-** Technology first demonstrated at University of Michigan by Prof. Zhen Xu. Two decades of IP accumulated before the first commercial entity formed
- **2021-Breakthrough Device Designation-** FDA grants HistoSonics’ Edison System Breakthrough Device Designation; HOPE4LIVER trial initiated, accelerated review pathway secured.
- **Oct 2023-First FDA De Novo clearance-** Marketing authorization for liver tumors ≤ 4 cm. De Novo is the most rigorous premarket pathway for devices with no prior predicate; it created histotripsy as a new FDA device category.
- **Dec 2023 onwards-Commercial launch-** First procedure performed; multiple centers active within months; 295-patient real-world safety study published with a 5.2% complication rate, favorable to comparable ablation methods.

Synthesis: The De Novo classification means any future competitor must either reference Edison as their predicate, acknowledging HistoSonics as the category originator, or navigate their own De Novo process. The first-mover advantage is regulatory architecture, not just timing.

Risk to watch: Current FDA clearance is limited to liver tumors ≤ 4 cm visible on ultrasound. Each additional indication requires a separate clearance. Trial readout pace is the primary de-risking signal to monitor.

2. Ecosystem At A Glance - 5 Companies. 3 Countries. 1 FDA-Cleared Device

5

Companies globally

Tracxn-tagged, March 2026

4

Institutionally funded companies

Arrayus unfunded - stealth stage

3

Countries with funded presence

US, Canada, Japan

2.1 Stage distribution- late-stage capital is already here

No seed activity, category has moved directly to institutional VC without a seed formation phase

Across 14 disclosed funding rounds since 2009, the ecosystem has attracted $625 in total equity. The distribution tells a two-speed story: late-stage capital dominates (85% of total funding, led by HistoSonics' $250M raise in 2025), while early-stage activity is now accelerating, 9 early-stage rounds totalling ~$90M signal that new entrants are attracting institutional conviction.

Table 2

Funding by Stage in Histotripsy

Stage	Total Rounds	Total Funding	Peak Year	What it signals
Early Stage	9	$90M	2025 ($34M)	Accelerating- 2 rounds in 2021–23, 2 in 2025; new entrants attracting VC
Late Stage	5	$532M	2025 ($250M)	HistoSonics dominant; late-stage capital validates commercial readiness

YTD figures are considered up to Mar 27, 2026 ($ = USD) - Source: Tracxn

Synthesis: Histotripsy's stage distribution is unusual, $532M in late-stage funding already deployed while early-stage rounds only now accelerate, meaning the category has skipped the formation-to-validation arc and is already pricing in commercial scale. The investor implication is precise: HistoSonics exited at $2.3B, but SONIRE, Sound Blade, and Petal still carry early-stage valuations, not a direct read-through, since HistoSonics exited with FDA clearance, 2,000+ patients treated, and a 14-year evidence base none of the challengers hold. The real signal is that the exit confirms the category can produce platform-scale outcomes. Challengers are priced for pre-clearance risk, not post-clearance value, and that window compresses with every de-risking milestone they achieve.

2.2 Geography - US-led, with two credible challengers emerging

Active venture capital is concentrated across 3 countries, but only 4 of the 5 companies carry institutional funding. The US holds the only FDA-cleared device and the only completed exit. But Canada and Japan are moving:

Sound Blade Medical closed a $17M, Series A within 16 months of founding, the fastest formation-to-funding cycle in the ecosystem, and SONIRE (Japan) holds the second-largest disclosed round, a $24M, Series B outside the US.

Table 3

Funding by Geography in Histotripsy

Country	Companies	Total Funding	Investment signal
United States	2	$584M	Category creator & commercial launch hub; holds the only cleared device globally
Canada	1	$17M	Sound Blade Medical- fastest formation-to-funding in the ecosystem (16 months)
Japan	1	$24M	*SONIRE Therapeutics- largest non-US raise; signals Asia-Pacific pathway interest*

YTD figures are considered up to Mar 27, 2026 ($ = USD) - Source: Tracxn

Synthesis: The concentration of funded activity across just 3 countries is a feature, not a limitation. Canada and Japan are not building competing products, they are building parallel regulatory pathways. SONIRE's dual-track approach (PMDA + US FDA) is the most deliberate strategic positioning in the ecosystem outside of HistoSonics itself. For investors, the non-US geographies represent the highest-optionality entry points, pre-reimbursement, pre-strategic premium, and in markets where the competitive field is still effectively empty.

2.3 Founded timeline - 11-year gap, then four companies in four years

Company formation did not grow linearly, it was flat for 11 years and then spiked at three distinct moments, each triggered by a specific regulatory or clinical proof point.

Table 4

Company Founded Year in Histotripsy

Founded	Companies	Country	Formation Signal
2009	Histosonics	United States	First pure-play histotripsy company, spun out of University of Michigan. It stood alone for 11 years.
2020	SONIRE Therapeutics	Japan	First non-US histotripsy formation. Founded in the wake of HistoSonics' large Series C raises and growing clinical evidence.
2020	Arrayus	Canada	Multi-modal platform including histotripsy. Founded the same year as SONIRE, pre-institutional, development stage.
2021	Petal	United States	Founded the same year as FDA Breakthrough Device Designation, direct response to regulatory de-risking.
2023	Sound Blade Medical	Canada	Founded the same year as FDA clearance. Series A closed within 16 months, clearest evidence that clearance itself acted as a formation trigger.

Data note: Geography and stage data reflect Tracxn's funded-company taxonomy (3 countries, 4 Institutionally-funded companies). 5 total tagged companies include legacy, unfunded, and geographically distributed players not captured in the funded cohort.

Synthesis: The 11-year gap between HistoSonics (2009) and the next wave (2020) is not a sign of slow development, it is the signature of a deep-science category that required decades of academic work before commercial formation became viable. The next formation trigger is the first CMS reimbursement code for histotripsy, expected within 2–3 years on the standard post-clearance timeline. When that lands, expect another formation wave and a simultaneous compression of available entry valuations. The window to invest at pre-reimbursement prices is open now.

3. Funding Landscape - Follow The Money

14 funding rounds. ~$625M raised. ~90% of capital concentrated in one company. And yet the two largest rounds in the ecosystem's history were both raised after FDA clearance. The money is not slowing down. It is accelerating.

$625M
Total equity funding
Across all disclosed rounds

14
Total funding rounds
2009 to March 2026

Oct 2023
Raised post-clearance
Oct 2023 → Mar 2026
(~62% of total)

3.1 Year-on-year funding - a category that just woke up

For 9 years (2009–2018), the ecosystem averaged under $10M per year, reflecting a technology in clinical development but without commercial proof.

The pattern breaks sharply in 2019 with HistoSonics' first Series C ($54M), accelerates through 2022 ($102M, two rounds), goes completely silent in 2023 as the market digests the FDA clearance, then surges to $285M in 2025, the highest single-year total in the category's history. The 2023 zero is not a slowdown; it is the market catching its breath before a sprint.

Table 5

Y-O-Y Funding Trends

Year	Total	Funding volume	Rounds
2009	$14M		1
2014	$2M		1
2015	$3M		1
2017	$8M		1
2018	$7M		1
2019	$54M	Series C	1
2020	$41M	Series C	1
2021	$5M		1
2022	$102M	Series D + Series B	2
2024	$102M	Series D	1
2025	$285M		3

YTD figures are considered up to Mar 27, 2026. ($ = USD)- Source Tracxn

Data note: Total equity funding across the 5-company ecosystem is ~$625M (Tracxn, March 2026). Year-on-year trends sum to ~$622M; the ~$3M variance is attributable to SONIRE Therapeutics, whose Tracxn-verified total funding is ~$24M but for which a complete year-by-year round breakdown is not fully disclosed. The $24M figure is used as the verified company-level total throughout this report.

Synthesis: The 2023 zero immediately after FDA clearance is the counterintuitive signal. The year a category receives its defining regulatory approval is almost never its strongest funding year, existing investors pause to observe commercial uptake before committing to the next round, and new investors need time to underwrite the thesis. What follows that pause is more telling. The 2024–2025 rebound ($386M across two years, 62% of all capital ever raised in the category) is not a continuation of the pre-clearance trend, it is a step-change. Capital is now moving at a different order of magnitude, and the 2025 peak of $285M suggests the acceleration is not yet finished.

3.2 Top funded companies - one giant, four challengers

HistoSonics accounts for 90% of total disclosed funding ($566M of $625M), a concentration level that tells two stories simultaneously:

the category leader has strong institutional conviction behind it, and the challenger cohort is still early-stage enough to represent meaningful upside for new investors entering now.

Table 6

List of Top Funded Companies

Company	Total Funding	Latest Round	Stage	Investment signal
HistoSonics	$566M	$250M (Oct 2025)	Acquired	Founders Fund, J&J Innovation, Varian, Alpha Wave, Amzak Health
SONIRE Therapeutics	$24M	$17M (Nov 2022)	Series B	SBI Investment, Mitsubishi UFJ Capital, Nomura Sparks, 13 others
Petal	$18M	$18M (Aug 2025)	Series B	Zenture, K50 Ventures
Sound Blade Medical	$17M	$17M (Jan 2025)	Series A	*Amzak Health, Lumira Ventures, Invest Nova Scotia*

YTD figures are considered up to Mar 27, 2026. ($ = USD) - Source: Tracxn

Synthesis: The challenger cohort, SONIRE, Petal, Sound Blade has collectively raised ~$59M across 4 rounds. That is less than a quarter of HistoSonics' 2025 Series E alone. The asymmetry between the category leader's exit valuation (~$2.3B) and the challengers' current funding levels is the investment signal: Three institutional-grade companies exist in a category where the only cleared, commercially active participant exited at $2.3B. That figure is not a ceiling applicable to pre-clinical assets on a like-for-like basis, it reflects a risk profile that included FDA clearance, a national reimbursement code, and real-world commercial deployment. The challengers are priced at their current stage, which is earlier and riskier. The investment signal is not valuation arbitrage against the HistoSonics exit; it is the question of whether any of these companies can reach an analogous de-risking milestone, first clearance, first reimbursement code, first pivotal trial readout, that structurally re-rates their valuation

4. Company Profiles - Who Is Building the Category

HistoSonics

Acquired - ~$2.3B valuation

Founded	HQ	Total Funding (USD)	Latest Round (USD)
2009	**Ann Arbor, MI / Minneapolis, US**	**$566M**	**$250M | Oct 2025 (Series E)**

STRATEGIC PROFILE

- **Product:** Edison® Histotripsy System, the first and only FDA-cleared histotripsy device globally. A non-invasive, image-guided sonic beam therapy platform that mechanically destroys tumors without valuation incisions, heat, or radiation.
- **Clinical status:** FDA De Novo clearance for liver tumors ≤ 4 cm (Oct 2023). Over 2,000 patients treated at 50+ US medical centers. Active trials: HOPE4KIDNEY (kidney, NCT05820087), GANNON (pancreatic, NCT06282809). UK limited market access secured (Jun 2025).
- **Exit event:** Majority stake acquired Aug 2025 by K5 Global, Bezos Expeditions, Wellington Management at ~$2.3B valuation. Management-led; CEO Mike Blue continues.

KEY INVESTORS

- Founders Fund
- Alpha Wave Global
- J&J Innovation
- Varian Medical Systems
- Yonjin Capital
- SWIB (State of Wisconsin Investment Board)
- Venture Investors
- Amzak Health
- Lumira Ventures

Investor signal: The $2.3B exit establishes that the category can produce platform-scale outcomes, a proof point that did not exist before August 2025. Founders Fund and Bezos Expeditions are technology platform investors, not traditional medtech funds, which signals the valuation was underwritten as a platform rather than a single-device acquisition. For the challenger cohort, the relevant takeaway is not that they will exit at the same multiple, they carry materially higher regulatory and clinical risk at their current stage, but that a strategic or technology acquirer has now demonstrated willingness to pay platform-scale prices for histotripsy. That changes the ceiling conversation; it does not eliminate the discount for being earlier.

SONIRE Therapeutics

Series B - $24M raised

Founded	HQ	Total Funding (USD)	Latest Round (USD)
2020	**Tokyo, Japan**	**$24M**	**$17M | Nov 2022 (Series B)**

STRATEGIC PROFILE

- **Product:** Suizenji, next-generation HIFU system using cavitation bubbles to enhance therapeutic heating and real-time treatment visualisation. Designed to dramatically lower acoustic energy requirements while improving image clarity. *(Suizenji's primary therapeutic mechanism is thermal HIFU; cavitation is an enhancement layer. SONIRE is included in this report under the "cavitation-adjacent" classification defined in Appendix A.3, not as a pure-play histotripsy company).*

- **Clinical status:** Phase 2 randomised trial underway in Japan for unresectable pancreatic cancer (HIFU + chemotherapy vs chemotherapy alone; 90 participants). FDA Breakthrough Device Designation granted Oct 2024. US trial preparation underway for 2025. NEDO-funded for international expansion.

- I**ndication focus:** Pancreatic cancer (primary). Among the hardest-to-treat solid tumours, five-year survival rate ~12%. No current non-surgical ablation option exists.

KEY INVESTORS

- SBI Investment
- Mitsubishi UFJ Capital
- Nomura Sparks Investment
- Daiwa Corporate Investment
- Fast Track Initiative
- JA Mitsui Leasing
- Resona Capital
- Carbon Ventures
- FFG Venture Business Partners

Investor signal: The only non-US company with FDA Breakthrough Device Designation in this space. Pancreatic cancer is the highest-unmet-need solid tumour indication, if Suizenji reaches US clearance, it becomes an acquisition target for any strategic wanting a non-liver pipeline.

Petal

Series B - $18M raised

Founded	HQ	Total Funding (USD)	Latest Round (USD)
2021	**Los Angeles, CA, United States**	**$18M**	**$18M | Aug 2025 (Series B)**

STRATEGIC PROFILE

- **Product:** Acoustic Sculpting platform, a proprietary form of boiling histotripsy integrated with AI and robotics for "incisionless surgery." Uses focused acoustic energy to create precise vapor-filled cavities that mechanically liquefy targeted tissue without incisions, heat, or toxicity. Multi-imaging guidance compatible (ultrasound and others).

- **Clinical status:** Investigational use only, not yet cleared or approved. Pre-clinical and early feasibility stage. Platform being evaluated across oncology indications. Co-founder Dr. Tanya Khokhlova (University of Washington) is the inventor of boiling histotripsy, one of the founding scientists of the underlying mechanism.

- **Differentiation:** Broadest platform ambition in the ecosystem: Petal is not building a single-indication device but an end-to-end incisionless surgical system integrating histotripsy, AI-guided targeting, and robotics. Founder Prash Chopra has explicitly positioned this as a new surgical category, not a variation on ablation. Backed by Dr. Fred Moll, co-founder of Intuitive Surgical (da Vinci).

KEY INVESTORS

- Zenture
- K50 Ventures

Investor signal: Dr. Fred Moll's participation is the most significant signal in Petal's cap table. Moll co-founded Intuitive Surgical and built the da Vinci system into a $50B+ company. His backing of Petal is not a passive financial bet, it is an endorsement from the person who has already built the last major category creation in surgical robotics that Petal is explicitly trying to replicate in acoustic surgery.

Sound Blade Medical

Series A - $17M raised

Founded	HQ	Total Funding (USD)	Latest Round (USD)
2023	**Halifax, Canada**	**$17M**	**$17M | Jan 2025 (Series A)**

STRATEGIC PROFILE

- **Product:** Handheld histotripsy platform, a compact, ultrasound-guided device that delivers image-guided histotripsy from a handheld form factor. Spun out of Dalhousie University; developed with AI-assisted machine learning targeting algorithms.
- **Clinical status:** Investigational use only, not yet available for sale. Preclinical study underway (Dalhousie University + Virginia Tech), evaluating complication rates vs surgery. New CEO Dr. Neil Barman appointed Jul 2025 to lead the clinical development phase. Regulatory approvals being accelerated.
- **Differentiation:** Handheld form factor is the key distinction from all other players. If validated, it extends histotripsy to settings where a large fixed system (Edison) is not feasible, endoscopy suites, interventional radiology, low-resource settings.

KEY INVESTORS

- Amzak Health
- Lumira Ventures
- Invest Nova Scotia

Investor signal: Founded in 2023, Series A closed within 16 months, the fastest formation-to-funding cycle in the ecosystem. Amzak and Lumira also backed HistoSonics, the only cross-portfolio investors in the space, signalling a deliberate category-level bet, not a single-company wager.

Arrayus

Unfunded - Seeking first institutional round

Founded	HQ	Total Funding	Status
2020	**Burlington, Ontario, Canada**	**Undisclosed (grant-funded)**	**Health Canada approved, uterine fibroids**

STRATEGIC PROFILE

- **Product:** MRI-guided focused ultrasound platform, spun out of Sunnybrook Research Institute (Toronto). Built around the world's first clinically-available fully electronically steered flat phased array (6,144 elements), vs the ~200-element spherical arrays used by all current commercial systems. Multi-modal: delivers thermal HIFU, histotripsy, and hyperthermia from a single platform.

- **Clinical status:** Health Canada approval granted 2024 for uterine fibroid tissue ablation, first commercial milestone. Clinical trials underway for oncological indications (liver, pancreatic cancer). Partnership with Bracco Imaging (Sep 2024) to enhance drug delivery for pancreatic cancer using focused ultrasound and microbubble technology. Seeking first institutional funding round.

KEY INVESTORS

- Grant-funded: FACIT
- Ontario Institute for Cancer Research
- Toronto Innovation Acceleration Partners (TIAP)
- Ontario Centres of Excellence
- Seeking first institutional round (active)

Investor signal: Arrayus presents a concentrated set of de-risking events already achieved (Health Canada approval, Bracco partnership) at pre-institutional pricing, a profile that typically compresses with the first institutional round. A company founded by the world's most published focused ultrasound scientist, with a cleared device, active cancer trials, and a strategic partnership with Bracco Imaging, at pre-institutional valuation is the definition of an early-entry window that closes with the first term sheet.

4.1 How companies differentiate, indication, device design, clinical stage

The 5-company ecosystem is differentiated primarily by three axes: primary indication focus, device form factor, and clinical stage maturity. No two companies are identically positioned, but the differentiation is not yet stable, as pre-clinical companies have not yet declared final indication strategies.

Direct competition within the 5-company universe is limited by the fact that only HistoSonics is commercially active. The most significant emerging overlap is pancreatic cancer, where HistoSonics is expanding via its HOPE4LIVER follow-on trials and SONIRE is building its entire company.

Table 7

Histotripsy Company Differentiation Across Indication, Device, and Stage

Company	Primary indication	Device format	Key differentiator	Clinical stage
HistoSonics	Oncology - liver (cleared); kidney, pancreas, prostate (trials)	Fixed robotic system (Edison®)	Only FDA-cleared histotripsy device. Widest clinical evidence base - 2,000+ patients treated.	Commercial (FDA cleared Oct 2023)
Sound Blade Medical	Multi-indication, oncology, BPH (exploratory)	Compact handheld platform	Smallest form factor in the ecosystem. Designed for settings where a fixed system is not feasible.	Investigational - pre-clinical / feasibility
Petal	Oncology (cancer first); arteries, blood clots, spine (pipeline)	Robotic AI-integrated platform	Acoustic Sculpting + AI + robotics - broadest platform ambition. Positions as a new surgical category, not ablation.	Investigational - first human trials planned
SONIRE Therapeutics	Oncology - pancreatic cancer (primary)	HIFU system with cavitation enhancement	Only company targeting pancreatic cancer specifically. Dual regulatory track: Japan PMDA + US FDA.	*Phase 2 RCT underway (Japan); US IND preparation*
Arrayus	Oncology - liver, pancreas, kidney; uterine fibroids (cleared)	MRI-guided phased array (6,144 elements)	Only multi-modal platform (histotripsy + thermal HIFU + hyperthermia). Health Canada cleared for uterine fibroids.	*Health Canada cleared (fibroids); cancer trials underway*

Synthesis: The clearest differentiation in the ecosystem is form factor. HistoSonics owns the fixed hospital-grade system; Sound Blade is explicitly building the handheld alternative for settings the Edison cannot reach. These two companies are more complementary than competitive, and that dynamic makes both more valuable to a strategic acquirer who wants full-market coverage.

5. Investor & Exit Activity - Who's Betting on It, and Who's Already Cashing Out

One acquisition. No IPOs. And a ~$2.3B exit just ~22 months after first FDA clearance. The exit architecture of this ecosystem is not a future projection, it has already started.

Top 5
Most active investors
Ranked by round count

2
Cross-portfolio investors
Lumira Ventures - 2 companies

~$2.3B
Largest exit to date
HistoSonics - Aug 2025

5.1 Most active investors - ranked by round count

The data below reflects the top 5 most active investors by number of rounds, drawn from a broader investor base across the ecosystem.

Venture Investors leads with 6 rounds, all concentrated in HistoSonics,signalling sustained long-hold conviction through multiple funding cycles. Lumira Ventures and Amzak Health are the only investors with cross-portfolio exposure, having backed both HistoSonics and Sound Blade Medical, the only players running a deliberate category-level strategy.

Table 8

List of Most Active VCs by Number of Rounds (Non-Exhaustive List)

Sl No.	Investor	Portfolio Cos.	Rounds	Recent investments	Signal
1	**Venture Investors**	1	6	HistoSonics (Jul 2024, $102M) HistoSonics (Dec 2022, $85M)	*Highest round count in the ecosystem, 6 rounds. Long-hold VC; sustained conviction across multiple funding cycles.*
2	**Lumira Ventures**	2	5	*Sound Blade (Jan 2025, $17M) HistoSonics (Jul 2024, $102M)*	*Only cross-portfolio investor alongside cross-participation in both category leader and challenger, category-level bet.*
3	**Yonjin Capital**	1	3	HistoSonics (Jul 2024, $102M) HistoSonics (Dec 2022, $85M)	*Asia-Pacific VC with US medtech focus; bridge investor signalling Asian market distribution interest.*
4	**Amzak Health**	2	2	Sound Blade Medical (Jan 29 2025, Series A, $17M) HistoSonics, (Jul 31 2024, Series D, $102M)	*Second cross-portfolio investor alongside Lumira, both backed HistoSonics and Sound Blade, reinforcing category-level conviction.*
5	**Higin Capital**	1	2	SONIRE Therapeutics (Nov 30 2022, Series B, $17M) SONIRE Therapeutics, Jun 11 2021, Series A)	*Anchors SONIRE's cap table alongside larger Japanese institutional investors; signals conviction in the Japan regulatory pathway.*

YTD figures are considered up to Mar 27, 2026. ($ = USD) - Source Tracxn

Synthesis: Lumira Ventures and Amzak Health are the two investors who have backed both HistoSonics and Sound Blade Medical, the only cross-portfolio positions in the ecosystem. An investor backing both the category leader and a challenger is not hedging, they are building a position that pays regardless of which company dominates commercial adoption. The fact that two separate funds have independently arrived at the same cross-portfolio strategy is the clearest signal yet that category-level investing in histotripsy has begun.

5.2 Acquisitions - one exit, one category-defining price

The ecosystem has produced one acquisition. HistoSonics was not acquired by a medtech strategy, it was acquired by K5 Global, Bezos Expeditions, and Wellington Management:

Table 9

List of Acquisition in Histotripsy

Date	Acquired	Acquirer(s)	Price	Signal
Aug 2025	HistoSonics	K5 Global, Bezos Expeditions, Wellington Management (US)	~$2.3B	Tech-growth buyers, not a medtech strategic, category valued as a platform, not a device.

YTD figures are considered up to Mar 27, 2026. ($ = USD) - Source Tracxn

Synthesis: The absence of acquisitions by large medical device companies suggests that histotripsy is still in a validation phase from a clinical and commercial standpoint. Until these incumbents enter the market, emerging players are likely to remain independently valued. However, once strategic buyers begin acquiring in the space, valuation benchmarks are expected to shift upward, closing this window of relatively lower entry pricing.

technology growth investors and a major asset manager. This signals histotripsy is being valued as a platform, not a device.

6. **Forward Insights** & Opportunities

The FDA clearance happened. The reimbursement code exists. The category leader has been acquired at ~$2.3B. Everything that follows is about who captures the next wave and whether the window stays open long enough.

Why now - three factors converging simultaneously

Histotripsy's moment is not a single event, it is the convergence of three independent timelines that are now aligned for the first time.

Regulatory: the FDA De Novo clearance in October 2023 created a new device category and removed the single largest barrier to institutional adoption.

Commercial: CMS assigned a national average reimbursement of $17,500 per histotripsy liver procedure (CPT code 0686T), meaning hospitals can now build a viable economic case for the system.

Capital: the ~$2.3B HistoSonics exit has set a public valuation anchor for the category that did not exist ~22 months ago. These three factors- regulatory clearance, reimbursement, and a proven exit multiple have never been simultaneously present before. They are present now.

Five forward-looking signals

01

HOPE4KIDNEY FDA submission expected 2026

HistoSonics' HOPE4KIDNEY IDE trial is nearing completion, with FDA submission expected in 2026. Approval would expand into kidney tumors, significantly increasing the addressable market and reinforcing histotripsy as a multi-indication platform. The submission marks a key near-term de-risking milestone.

02

SONIRE's Phase 2 readout is the non-US proof point

SONIRE Therapeutics' randomized Phase 2 trial in pancreatic cancer (Japan) is a critical non-US milestone. A positive readout would enable the PMDA pathway, accelerate US IND plans, and validate histotripsy in one of the most challenging solid tumors—while positioning SONIRE as a potential acquisition target.

03

CPT upgrade to Category I as reimbursement inflection

Histotripsy currently operates under Category III CPT code 0686T. An upgrade to Category I, expected as clinical usage scales, would unlock broader private payer coverage and materially accelerate adoption, marking a key commercial inflection point.

04

First institutional cross-portfolio investor signals category maturation

Currently, only Lumira Ventures and Amzak Health hold positions across multiple histotripsy companies. Entry of additional institutional or crossover investors would signal a shift to category-level investing—typically a precursor to an M&A wave within 18–24 months.

05

Petal's first-in-human trial is the platform bet signal

Petal Surgical's planned first-in-human trials will mark the second US-based histotripsy company entering human studies. This expands the clinical evidence base, strengthens the case for broader reimbursement, and increases the number of viable acquisition targets for strategics.

Investment thesis - what a bet on this space looks like

The investment thesis for histotripsy is not a technology bet, the mechanism has been validated by FDA clearance, real-world clinical data across 2,000+ patients, and a $2.3B platform acquisition. But it is also not a simple arbitrage against that exit valuation. The challengers carry meaningfully different risks: none hold FDA clearance, none have published pivotal trial data, and none have demonstrated commercial reimbursement uptake. The thesis is a staged de-risking bet: each regulatory milestone, first clearance, first Category I CPT upgrade, first pivotal readout outside the US, compresses the discount applied to pre-clearance assets and narrows the gap between current early-stage pricing and any eventual strategic acquisition price.

Investors entering now are compensated for taking that regulatory and clinical risk ahead of the milestones; the compensation shrinks as the milestones arrive.

A direct investment in the challenger cohort, SONIRE, Sound Blade, or Petal is a bet on one of three outcomes: acquisition by a medtech strategic before the category fully consolidates, an IPO once a second FDA clearance validates the multi-indication platform thesis, or continued independent growth as reimbursement broadens to new indications. All three outcomes are plausible within a 3–5 year horizon. The downside scenario is regulatory setback on a pivotal trial, addressable through portfolio diversification across the three challengers rather than single-company concentration.

Risks & watchouts

Reimbursement expansion risk
CMS reimbursement currently covers only liver tumors at $17,500 per procedure. Expansion to kidney, pancreas, and other indications requires separate coverage determinations. If private insurers do not follow Medicare's lead or if Category I upgrade is delayed, hospital adoption will remain constrained to Medicare patients only, limiting commercial scale for the challengers.

Single-indication FDA clearance ceiling
All five companies are navigating a regulatory environment where each new indication requires independent FDA clearance. A clinical trial failure in kidney (HOPE4KIDNEY) or pancreas would reset the multi-indication platform thesis and likely suppress valuations across the entire ecosystem, not just the affected company.

Incumbent ablation technology response
HIFU, RFA, and cryoablation manufacturers are not standing still. Any meaningful technical advance in thermal ablation, particularly on the heat-sink effect problem would reduce histotripsy's core differentiation. The window of uncontested mechanical advantage is real but not permanent.

Acquirer timing risk
The most likely strategic acquirers- Medtronic, J&J, Boston Scientific, Stryker have not yet moved. If they wait until a second or third clearance reduces regulatory risk further, the acquisition premium available to early-stage investors will compress. The optimal entry is before the strategics arrive; predicting exactly when that window closes is the central risk in this thesis.

Valuation benchmark risk
The $2.3B HistoSonics exit is a category proof point, not a direct benchmark for earlier-stage assets. Valuations should be discounted for regulatory uncertainty, clinical execution risk, 4–7 year time-to-exit, and variability in acquirer type. The exit validates the category, but does not de-risk individual companies.

7. Appendix

A.1 Research Scope & Data Cut-Off

The report covers the global histotripsy ecosystem as defined by confirmed pure-play or cavitation-adjacent companies identified through Tracxn's histotripsy feed, supplemented by primary source research on each company. The final 5-company universe was determined by applying a strict mechanism-of-action filter: companies were included only if their core technology uses non-thermal, mechanical, cavitation-based focused ultrasound as the primary treatment modality or a confirmed histotripsy variant (including boiling histotripsy and multi-modal platforms incorporating histotripsy). Companies using thermal HIFU as their primary mechanism, or ultrasound for reparative/remodelling purposes (NIUT), were excluded. Histotripsy and multi-modal platforms where histotripsy is a primary component. Funding and investment analysis incorporates all-time activity, with year-to-date (YTD) figures considered up to March 27, 2026.

A.2 Data Sources

This report synthesises insights from a market intelligence database, company disclosures, regulatory filings, and secondary research sources, including:
Market intelligence databases: Tracxn (startup identification, funding rounds, investor participation, geographic classification, and exit tracking) - 5-company histotripsy universe, extracted March 27, 2026.
Secondary sources:

- Company websites, press releases, and investor announcements
- Regulatory body publications from the FDA, Health Canada, and PMDA
- Focused Ultrasound Foundation company profiles and clinical trial updates
- ClinicalTrials.gov for active trial registrations and status
- Media reports and sector-focused publications covering medtech and focused ultrasound developments

A.3 Ecosystem Segmentation & Inclusion Framework

For analytical consistency, the 5-company universe was determined by applying a strict mechanism-of-action filter. Companies were included only if their core technology uses non-thermal, mechanical, cavitation-based focused ultrasound as the primary treatment modality. The following segmentation logic was applied:

Confirmed histotripsy - included: Companies whose primary mechanism is histotripsy (inertial cavitation), boiling histotripsy, or acoustic sculpting/liquefaction variants where tissue destruction is the stated therapeutic endpoint.

Cavitation-adjacent - included with notation: Companies using cavitation as a component of a broader multi-modal platform (Arrayus) or as an enhancement mechanism alongside thermal delivery (SONIRE Therapeutics), included following manager review with appropriate context noted in company profiles.

Excluded - thermal HIFU: Companies whose primary mechanism is continuous-wave or long-burst thermal ablation were excluded on the basis of mechanism-of-action.

Excluded - NIUT (Non-Invasive Ultrasound Therapy): Companies using mechanical ultrasound for reparative remodelling rather than tissue destruction were excluded.

A.4 Funding, Investor & Exit Analysis

Funding analysis includes:

- Equity funding rounds including angel, venture capital, and strategic investments
- Publicly disclosed transactions only
- Stage-wise classification across Early Stage (Series A/B) and Late Stage (Series C and beyond)
- No seed-stage rounds were identified in the 5-company universe

Total funding note: Total equity funding across the 5-company ecosystem is ~$625M (Tracxn, March 2026). Year-on-year trends sum to ~$622M; the ~$3M variance is attributable to SONIRE Therapeutics, whose Tracxn-verified total funding is ~$24M but for which a complete year-by-year round breakdown is not fully disclosed. The $24M figure is used as the verified company-level total throughout this report.

Arrayus funding note: Arrayus is classified as Unfunded and is excluded from all funding totals, investor tables, and geographic funding counts.

Petal round classification note: Tracxn classifies Petal's August 2025 round as Series B ($18M). External press coverage describes this as a Series A. Tracxn's classification is used as the authoritative stage designation throughout this report.

Investor analysis focuses on:

- Top 5 most active venture capital firms by number of rounds (non-exhaustive list)
- Cross-portfolio participation patterns
- Identification of mega rounds (>$100M) influencing annual funding trends

Exit analysis includes:

- Acquisitions involving confirmed histotripsy companies only
- Publicly disclosed exit transactions only
- No IPOs were recorded in the 5-company universe

A.5 Limitations & Interpretation Notes

The report focuses on startup-led commercial activity and does not benchmark academic research programmes or hospital-based histotripsy development unless directly relevant to the commercial ecosystem.

Funding data reflects publicly announced equity transactions and may underrepresent undisclosed investments, grant-based funding, or strategic programme support not captured in Tracxn.

Given the small number of companies (5) and funding rounds (14), annual funding trends may be significantly influenced by individual large transactions, particularly HistoSonics' rounds - limiting direct comparability across years.

The 5-company universe reflects confirmed active companies as of March 2026. The ecosystem is early-stage and the company count may change materially in response to regulatory milestones, reimbursement developments, or new formation activity.

All commercial, clinical, and competitive signals should be interpreted as directional indicators of ecosystem evolution rather than definitive measures of market maturity or investment suitability.

Abbreviation	Full Form	Context in this report
HIFU	High-Intensity Focused Ultrasound	Thermal FUS modality - distinct from histotripsy's non-thermal mechanism
RFA	Radiofrequency Ablation	Incumbent thermal ablation modality competing with histotripsy
MRI	Magnetic Resonance Imaging	Imaging guidance used by Arrayus' platform; alternative to ultrasound guidance
FDA	Food and Drug Administration (US)	Granted De Novo clearance for HistoSonics Edison system, Oct 2023
PMDA	Pharmaceuticals and Medical Devices Agency (Japan)	Japan's regulatory body; SONIRE pursuing parallel PMDA pathway
IDE	Investigational Device Exemption	HistoSonics HOPE4KIDNEY pivotal IDE trial; FDA pathway for device trials
De Novo	FDA De Novo Classification Request	Pathway used by HistoSonics; creates new device category with no predicate
CPT	Current Procedural Terminology	AMA code system; 0686T is the histotripsy liver CPT code
CMS	Centers for Medicare & Medicaid Services (US)	Assigned $17,500 national average payment for histotripsy liver procedure
RCT	Randomised Controlled Trial	SONIRE Phase 2 RCT for unresectable pancreatic cancer in Japan
BPH	Benign Prostatic Hyperplasia	Urology indication under exploration; HistoSonics running BPH feasibility work.
NCT	National Clinical Trial identifier	ClinicalTrials.gov prefix; e.g. HOPE4KIDNEY: NCT05820087

8. List of References

1. https://histotripsy.umich.edu/
2. https://pmc.ncbi.nlm.nih.gov/articles/PMC12469116/
3. *pmc.ncbi.nlm.nih.gov/articles/PMC7057529*
4. https://research.umich.edu/research-stories/histotripsy/
5. https://clinicaltrials.gov/study/NCT04573881 ; https://histosonics.com/news/histosonics-receives-fda-breakthrough-device-designation-for-novel-sonic-beam-therapy/
6. https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/denovo.cfm?id=DEN230012 ; https://www.hopkinsmedicine.org/news/articles/2026/01/histotripsy-offers-new-hope-to-patients-with-liver-tumors
7. https://pubmed.ncbi.nlm.nih.gov/39978577/
8. https://histosonics.com/our-technology/
9. https://histosonics.com/resources/clinical-evidence/
10. https://medtechspectrum.com/news/3/24670/histosonics-announces-2-25b-acquisition-by-consortium-of-top-tier-investors.html#:~:text=The%20Edison%20system%2C%20which%20received,momentum%20in%20research%20and%20adoption.
11. https://www.businesswire.com/news/home/20250807749442/en/HistoSonics-Announces-%242.25B-Acquisition-by-Consortium-of-Top-Tier-Investors
12. https://www.fusfoundation.org/posts/company-profile-sonire-therapeutics/#:~:text=The%20use%20of%20cavitation%20increases,treatment%20throughput%20in%20our%20system.
13. https://www.fusfoundation.org/posts/fda-grants-breakthrough-device-designation-for-pancreatic-cancer-treatment/
14. https://www.petalsurgical.com/
15. https://www.fusfoundation.org/posts/sound-blade-medical-secures-pilot-funding-series-a-financing/
16. https://arrayus.ca/?page_id=9
17. https://research.sunnybrook.ca/2024/10/sri-spin-off-company-arrayus-announces-health-canada-approval-of-its-focused-ultrasound-therapy-system/
18. https://www.bracco.com/article/bracco-imaging-and-arrayus-technologies-new-strategic-partnership
19. https://histosonics.com/
20. https://soundblademedical.com/
21. https://www.medicaldesignandoutsourcing.com/petal-surgical-acoustic-liquefaction-noninvasive-incisionless-surgery-prash-chopra/
22. https://www.fusfoundation.org/posts/fda-grants-breakthrough-device-designation-for-pancreatic-cancer-treatment/
23. https://www.fusfoundation.org/posts/company-profile-arrayus-technologies-inc/
24. https://www.fusfoundation.org/posts/focused-ultrasound-reimbursement-wins-in-2023-a-timeline/
25. https://www.fusfoundation.org/posts/company-update-histosonics/
26. https://www.fusfoundation.org/posts/sonire-therapeutics-begins-pancreatic-cancer-clinical-trial/
27. https://www.massdevice.com/petal-surgical-raises-10m-series-a/